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ARCHÆOLOGICAL SURVEY

OF

BENGAL

REPORT

1887.

BY

JOSEPH DAVIDITCH MELIK-BEGLAROFF,

ARCHÆOLOGICAL SURVEYOR, BENGAL.

PART I.

HISTORY AND TRADITION.

CHOGDA, BENGAL INDIA,

the 7th Apr *1888.*

To J. Ware Edgar Esq. CSI

My dear Sir

The following pages contain my report on the Archœology of Bengal for the year 1887.

The preliminary portion of it shews the lines on which it has been drawn up, and the object I had in departing from the procedure hitherto followed in drawing up these reports.

As I have a few copies printed for my private use, I take the liberty to submit one to you with my respects for your kind perusal.

You will perceive that parts I and II are wholly independent of each other.

I intend to use the conclusions arrived at in this report in my future ones, and it is therefore of great importance to me that I should possess the opinion of the learned world on their correctness.

It will be a service to the cause of Indian Archœology and an obligation conferred on me if you will favor me with your opinion, and with any hints, by following which, I may be able to make my reports more complete in future, and avoid any errors that may have crept into this.

For obvious reasons, I am unable to accompany this pamphet with the plates. I however annex one plate without which Part II of the report would be wholly unintelligible.

I beg to remain, Dear Mr Edgar

Yours Sincerely

JOS. D. MELIK-BEGLAR.

REPORT

OF THE

ARCHÆOLOGICAL SURVEYOR OF BENGAL,

1886-87.

The published researches on Indian Archæology are scattered over so many volumes, and with such irreglarity, that it is no exaggeration to say, that it is impossible for any but an expert, and difficult even for him, to lay his hands on all the papers which relate to Archæological research within any specified area, or to any particular division, or branch, of this fascinating science. So great indeed is this difficulty, that, after a probation of sixteen years, during fourteen of which I remained more or less closely connected with General Sir Alexander Cunningham; (probably the only living Archæolgist, who, if any one, is master of the literature of Indian Archæology) officially as his assistant, and unofficially as his respectful pupil, I feel, that I am yet by no means acquainted with all that has been done, even in the province of Bengal; of which Government in their resolution [Home Department No 87-103 of 6th June 1885] did me the honor to constitute me, the archæological surveyor.

On finding myself in a position to lay down my own course of action, I submitted for the kind consideration, and I hoped, approval, of the Bengal Governement, a sketch of my views on the subject.

The object aimed at by me, of which the sketch gave only a skeleton outline, was the compilation from previous research, and from the results of the operation of the Bengal branch of the Survey entrusted to my guidance, first a resumé of such previous research, and of such unrepealed verdicts of previous explorers as I could collect, supplemented with such new matter as might be brought to light by the Bengal Survey; so as to bring the exposition up to date; thus forming in some sort, a resumé of the present state of the Science as regards Bengal, and a guide to those who might wish to pursue the study of a fascinating Science; but who (judging from my personal experience in

wading through the literature of a century of Archæological research) would, without some such guide, in many cases only exchange a state of happy ignorance for one of perplexed uncertainty; secondly an exhaustive account of every typical or important building which deserved such treatment, for the use of professional engineers and architects, such building to be illustrated in full detail, with all the needful drawings which my professional training in, and practical familiarity with, the work of the Civil Engineer and Architect. (during my service as assistant and as Executive Engineer in the Bengal Public works department) shewed me to be necessary. This work would be drawn up somewhat on the lines of professional works on architecture, (for instance Ramrazes work, which is avowedly taken from the available treatises on architecture by Indian architects themselves) and therefore dealing with the Laws of construction, of proportion, and of composition, as exemplified in the actual remains examined, supplemented by critical comparison, on technical lines, of the various buildings with each other, and if possible with foreign architecture.

Such a mode of dealing with the subject appeared to me the only one, by which tangible, and permanently useful results could be obtained, for the generous expenditure about to be incurred by the Government which appointed me, and which would look to me to use my best endeavors in serving it to the best of my judgement. I deliberately laid aside the mode of treatment adopted by the late Dr. James Fergusson in his magnificent works on Architecture, although that mode of treatment would have very considerably lightened my labors, from a deep conviction, that, what was wanted to infuse new life into the dead bones of an extinct art, (and true Indian architecture is a dead art at present), was not a critique on it, such as had already been written far more ably by Dr. Fergusson than I could hope to do; but which with all its wealth of illustration and art-criticism, did not attempt in any single instance, to furnish those technical details which the professional architect needs; but an exposition of those laws of construction, of proportion, and of composition, without which, architecture as a science is impossible. Where was the advantage, of entrusting the work to a professional engineer, if he laid aside his technical knowledge, to take up the role of the dilettante art critic, in the wake of such a master as Dr. James Fergusson, whom he could never hope to rival, far less to excel in that particular line?

Actuated by these reasons, I so directed the operations of the survey as to attain my object. It will be readily understood, that to write a full report on the lines laid down by me, is an imposibility, till a sufficient mass of material can be

collected and actually drawn. Meanwhile I have busied myself, thinking out the rules which appeared to have regulated the dispositions, and proportions, of such buildings, as I had materials enough to reason upon.

A subsequent resolution of Government (Home Depertment No. $\frac{}{95-113}$ of 15th March 1886) has in some respects altered my status; and it may possibly render necessary, an unwished for change in my programme. But as the material for this Report was collected, when I excercised my independence of judgement, it will follow on the original lines. This second part of the Report must necessarily take some time longer to prepare, and will be submitted with the drawings as they reach completion.

It will be for the Government to judge, after the *Second* part is in their hands, whether, in acting in this manner, I did not adopt really, the course, calculated to secure results of professional value, in contradistinction to the art-citique method of dealing with the subject; which, however charming in the hands of a master, contains little of value to the professional Architect. Government can command the opinions of many professional Engineers and Architects, my seniors in service, and my superiors in professional ability, competent to sit in judgement on my work; whose verdict would carry weight with me, as with the professional brotherhood in Europe. I earnestly trust, that I may be permitted to pursue the course I had sketched out for myself; the adoption of which I feel convinced, will afford the best return for the money spent in the Bengal survey.

I append a list, showing the material on hand, which is being worked up into professionally complete drawings; from which Government will, I hope, perceive, that it is not want of application that causes the delay, but the profusion of technically accurate and complete drawings which must be made before they can be written about, that has caused the delay.

In my arrangement of the report now being submitted; I have adopted as my basis, the recently published "list of the ancient monuments of Bengal" by the Bengal Government: the information about each object, being, as far as possible, kept distinct; so as to admit of future reports being incorporated with it, by simply inserting the accounts of the objects not mentioned in this report, in their proper places, in their proper sequence, as they gradually undergo examination: and as I hope, if the programme of the ensuing season's operations be approved of, to finish the examination of certain districts; the reports, when that for the ensuing season will have been sent, will be com-

plete as regards those districts, and may if thought disirable be published; leaving the other districts partially examined, to be gradually completed, by incorporating future reports as they come in, before publication; thus publishing, not incomplete accounts, but complete accounts of the antiquities, district by district; one will thus he able to obtain all the information available regarding any one district, without turning over a dozen volumes. But this is a matter which is beyond my province to do more than offer respectful suggestions on; and as such, I beg they may meet with some indulgence.

A few words regarding the work of the two field seasons will not be out of place, as shewing how it is that the drawings are not yet sufficiently completed to write about. Besides the report now being submitted, and

Mr. Garrick's report for last year already submitted; the Bengal Branch of the Survey has yet to submit.

(1) Mr. Garrick's report for the last field season.

(2) My technical or the 2nd part of my report for the past two seasons which will be accompanied, (and as Government will perceive when it is sent that it cannot in fact be written without) by the following drawings more or less.

86 plates to illustrate the Superb Adina Majid: of these there are approximately.

3	Plates octuple quarto equal to		24	Quarto plates.
2	Sextuple quarto	„ ...	12	„
3	Quadruple	„ ...	12	„
1	Triple	„ ...	3	„
about 17	Double	„ ...	34	„
60	Single	„ ...	60	„
Total 86	plates equal to	...	145	Quarto plates.
37	plates to illustrate the tombs of Sher Shah and of Hasan Khan at Sasseram; equivalent to about		70	Quarto plates.
About 40	plates to illustrate the remains at Rohtasgarh, equivalent to about ...	... ...	55	Quarto plates.
About 30	plates of Temples at Konch, Umga, Maner, Sultanganj Patna, Shamshernagar, and some minor ones; equivalent to	...	50	Quarto plates.
Making a total of 193	drawings, representing in amount of work approximately	... ...	320	Quarto plates.

several of very intricate and laborious kind, and of which only about 15 are photographs.

I trust the Government will, with this information before them, understand how it is, that the drawings and the technical report thereon dependant, are not yet ready.

In conclusion, I invite the attention of Government to the "Notices of Sanskrit MSS. Vol. I. published by order of the Government of India. The work has a classified index at the end, which is very significant. The entire body of Sanskrit works in the possession of, or known to, the Government of India, available for classification and record; at least in Northern. India; is there classified under 19 heads, and the learned world has actually to learn, that, out of 1109 distinct works commented on in these comprehensive "Notices", there is absolutely not a single work on Silpa Sastra (Architecture)! It is not as though Silpa Sastra, did not come within the cognisance of the learned commentator Dr. Rajenda Lala Mittra. Silpa Sastra is in his index placed as the eleventh XI of the very comprehensive classification; but is deliberately and unavoidably left a blank (see page 320 321) notices, of Sanskrit MSS. Vol. I.

But the art exists crystallized in stone, if not laid down in ink on paper; and if not all, at least a fairly presentable portion of the law of the great art of Indian Silpa Sastra (architecture) is recoverable, by competent experts, from yet living, though sadly decaying examples. No amount of art criticism, by whomsoever written can ever compensate for the absence of these laws: and yet these laws exist preserved—nay petrified I should say, in stone and brick, though daily disappearing, (for to my individual and personal knowledge, 4 important buildings, one absolutely unreplaceable, have disappeared during the past 20 years). I have set myself the task of recovering these laws. Of my success or failure TIME and the professional ARCHITECT can alone be the judge. Will the Government which spends money with a lavish hand on so many other objects, constrain the art of Indian Silpa Sastra to continue petrified and lifeless? Sir Alexander Cunningham in his work on the "Aryan Order of Architecture" and Ram Raz in his work on Indian Architecture, (both works now rare) have attempted to lift a very small corner of the veil, I a professional Engineer and an humble disciple of Cunningham, see the want, feel the want—and passionately and humbly crave to lift a further portion of the Stony Veil; not through vanity, but in despair, because no one else has attempted or seems inclined to attempt it. Will the Government tie my hands and compel me to take up the role of the dilettante art critic?

BARDWAN DIVISION.

The places visited, referring to their numbers in the printed Bengal list of 1886 are 24 and 37, and besides these, are several others, which are not in the list, but which have been numbered 59, 60, 61, 62 and 63 in continuation of the numbers in the list.

Culna or Kalna, where objects Nos. 24, 37 59, 60 61 and 62 are situated is an old city but of no great importance; it existed in the days of Clive, which is the earliest historical mention I can find of it, besides the incidental mention in Chaitanyas carreer at the beginning of the 16th century: it was here that Mr. Watts escaping from Murshidabad on the eve of Serajuddaulas hostilities with Mir Jaffier and the English, met the British army which Clive had marched up, and urged the necessity of hastening operations. At present, such importance as it possesses, is due partly to its being the headquarters of one of the administrative subdivisions of the Bardwan Division, and partly to its being the site of the Mausoleums of several (3 Maharajas and 3 Maharanis) successive Maharajas of Bardwan. These Mausoleums grouped together as the new No. 61 of the list, lay of course no claim to any great antiquity, nor are they of much Archœological interest, although, as specimens of Hindu arechitecture, of the 18th and 19th centuries, they are not devoid of some importance in a history of Indian art. Of the remarkable buildings built by the Bardwan Rajas, I would particularly mention a circular inclosure containing 108 small temples, disposed in two rows; with a fine line of the Vakula tree between the rows: the temples are of brick, and small, being of one cell each, and each inshrines a small black stone emblem of Siva; they are each roofed by intersecting vaults, and crowned with a trident: the principal shrine is larger, but not essentially different.

A more interesting though less extensive building is the temple called Laljis Bari, dedicated to Krishna, within the great courtyard called the Samaj Bari. I could only see it from a distance, not being allowed to approach it; it is one of the most favorable specimens of the architecture of the period, and is profusely decorated with sculpture, both figures, and ornamental scroll and medallion work in cut brick: but no discription of it in words can convey such a clear impression of it as photographs, which are very desirable, even if correct plans elevations and sections of it, done to scale, together with reduced copies of the ornamental work, by impressions and by photographs, cannot be obtained. These last are really wanted, for I am aware of no building, which displays in a more favorable light the indigenous art and architecture of the period, in Lower Bengal.

There are three other temples within the inclosure, less imposing and less ornate, though on the same general principles, both in architecture, and in ornamentation, and I hope through the kind influence of a personal friend to secure partial if not full details to scale, of one or more of them. There is a fifth temple of a similar kind, and also belonging to the Bardwan State, outside the inclosure; this is as jealously guarded as those within the courtyard.

The remains of a temple of older date and now built into the "Dalan" of the Bhattacharjyas of Kalna is accessible, and as it is inscribed, its age is perfectly certain—there is however but little ornament about it; drawings shewing its details such as there is, will be found in the 2nd part of the report: it was built about the year 1780 by Pandit Ram Ram Shiddhanti who first settled in Kalna about A. D. 1770 and became the founder of the present family of the Kalna Bhattacharjyas of whom the late Pandit Tara Nath Tarkavachaspati well known by his compilation the "Vachaspatya" (a Sanskrit Encyclopœdia on the lines of, but much fuller than, Raja Radha Kanta Devas "Sabdakalpadruma") was, and Babu Bemala Charan Bhattacharjya the distinguished Dy. Magistrate is a member. But although there is not to my knowledge, historical notice of Kalna previous to Chaitanya, the ruins of several masjids and dargas fully attest its great importance in the 14 or 15 centuries.

The old Masjid and attached dargah, object No. 60 of the new addition to the Bengal list, are near the Mission house on the Guptipara Road: they stood within a cloistered inclosure, the Masjid of course facing east, and the Dargah in a separate inclosed, but attached Court, along the North of the Masjid. The entrance was of stone, and stone steps led up to it; the stones which formed the sill of the original gateway, are themselves taken from some older Hindu Temple though it is possible to tell to what divinity this temple was dedicated from the figure of Vishnu on garud which is still visible on the top sill which is now placed upside down. The road on the side of which the inclosure stands, had however, before the British Government introduced the innovation of looking after and constantly repairing roads, been evidently cut deeply by continuous traffic; as its present surface is so much lower than the sill of the gateway, that its original purpose has been forgotten, and it is now worshipped by Muhammadans and the more ignorant Hindus alike, with ghee, libations of milk, and with dabs of red paint, and as the stone which is granite now black with oil and ghee was once inscribed (No. 212 Bengal list of inscriptions) with some rude Muhammadan characters roughly chiselled and now totally illegible, its sanctity is considered unquestionable: only the upper and lower

sills now remain, the latter in situ as above narrated, and of course no one ventures to set foot on it, but a passage has been broken through the lower courses of the plinth and foundations of the wall close to the stone sill; from the marks of the setting on the lower sill, it appears the clear breadth of the doorway of which it formed the sill, was 2 feet 4 inches and that the side jambs were of an aggregate width each, of 12½ inches; so that the breadth including the stone side jambs must have been 4 feet 5 inches. It appears not only that the inclosure was was cloistered, but further it appears, that the roadway from the outer gate to the Masjid, was flanked on either side by houses apparently of a later period, and used either as shops or habitations for the serving mullah, they are however now all in ruins, and little beyond the plinths exist.

The Masjid itself is a brick one of 3 openings and 6 domes, the greater number of which have, including all the domes, already fallen in, and the rest is ready to fall; indeed the South end-wall has also partially fallen, and the place is consequently so encumbered with rubbish as to render any attempt at. accurate description in detail or measurement impossible without its removal. An inscription slab numbered 207 in the current years list, and now lying in the courtyard is said to have belonged to it, while a second one numbered 208 belonged to the Dargah. The Masjid must however have been a very fine one, and the remains shew traces of painting but not of encaustic tiles; which is strange; but perhaps all such as were on the surface have been carried away and the rest lie buried under fully 8 feet of rubbish heap. The pendentives of the Masjid deserve mention, they are yet intact on the inner face, and are very elegant, they are square in plan, the square form in plan being obtained by corbelling out; this is then vaulted over, thus forming the square chamber into an octagon above the pendentives, while higher up it is made into a circle by rows of serrated brick projecting corbelling. The Niches of the Masjid were elegant and the arches were cusped, but very little of them are now visible, owing to rubbish and jangal.

The Dargah is a commonplace building partitioned off from the main Court by a plain wall with a small doorway, which I suspect is a later addition. Traces of other partition walls exist dividing off the Court into two smaller parts besides the main central part fronting the Masjid itself, and they too are probably later, these spaces were probably partitioned off for dwelling purposes. The Masjid contains a tomb of Shah Majlis. His biograply is known to the Muhammadans of and near Kalna. There is a Dighi within a ½ a mile of the masjid nearly as big as the one at Bargaon, called Majlis Saheb's Dighi. Annually a Mela is held there on the Uttarayan Sankranti day.

On the whole. I think the removal of the rubbish desirable, and it is absolutely necessary if details of construction are wanted.

Somewhat further on, on a turn of the same road is a small inclosure with a small entrance numbered 59 in the new addition to the Bengal list, now completely blocked up by a great tree, so that the only access is by climbing the wall. Within, is a solitary tomb, said to be that of Majlis Saheb's brother, with a very well-preserved inscription in black stone. The inscription is numbered 209 in the current year's list. Close to the Tomb is a large masjid, which is either nameless or known as Majlis Saheb's masjid: (indeed every masjid here is called Majlis Saheb's masjid) which stands in what was once an extensive cloistered Courtyard, but which now stands on an open level spot, all but the lowest courses of the cloisters and inclosing walls except the entrance gate having long ago disappeared. Of the entrance gateway which was in the centre of the east wall, there remains now the stone side posts and portion of the jamb, with the hole for sliding in the beam with which the gates appear to have been closed when needful. Stone steps leading up to the gate still exist in front of the gate, but of the rest of the walls only the lowest parts with the string course of the plinth in places, exist; as however the brick foundations appear to cover a breadth of about 15 feet, I infer that cloisters abutting against the walls existed.

Within the Courtyard stood the Masjid, the inscription from which No. (210 Bengal list) now fallen lies exposed close to its central archway: it still stands in fairish order, and is capable of conservation. The Masjid has 5 openings in front, and of course 5 prayer niches at the back; and a row of pillars in the centre, along its length, and 4 corresponding pilasters against each of the long walls in the interior, divide off the interior into 10 squares, roofed by 10 domes, which are still intact: the pillars which are 4 in number are dissimilar, the 2 middle ones being stout ones, and different from the other two, which are much more slender; the pilasters are all plain, and the arches spring as usual from the pillars and pilasters forming squares which are turned into circles by corbelled pendentives, the corbellings being alternately plain and serrated. The entire building with the exception of the pillars and pilasters is of brick moderately ornamented, but the niches are profusely ornamented: the central niche which is the largest has a 6 cusped arch profusely ornamented both on the faces, on the spandrils, pilasters, and along the entire interior of the recessed octagonal surface, by cut brick ornaments: the two next niches one on each side are somewhat smaller, and the south one alone is ornamented, the north one which is behind the pulpit being plain, the last pair of niches one on each side are plain.

and small but are double, that is there are 2 niches one over the other.

The pulpit is small and 2 storied but neither the lower nor the upper could ever have been meant for the preacher to stand in and preach, as the open archways giving access to the interior square space within the pulpit are too small for a man to walk through upright, and consequently any one going in and standing upright within, would have his face bidden behind the arch face. Of course the preacher may have stood on the steps outside and leading up the pulpit to preach, but as the ornamental line and cornices of the pulpit run *through* the steps of the staircase the stairs are obviously an after addition. I conclude consequently that the structure was not intended to he used as a pulpit, but as in modern imambaras, as the support of the Tabut of Ali on the muhurram festival. It is however profusely ornamented, although the arches of the upper storey are plain gothic; the corner pilasters upper and lower are niched recessed ornamented similar to those in the Temple at Deogarh but of brick, the lower arehes are also plain, but the cornice separating the upper from the lower storey is extremely rich, the pulpit was covered by a Dome which has partially fallen in.

The side openings on the North and South faces of the masjid were closed by lattice work in brick and covered by tunnel vaults, that is, the arches which appeared externally through the thickness of wall, appear also internally, but the front or east openings are covered with cross vaulting, the ridge of which runs at right angles to the ridge of the arches that appear on the exterior and interior faces of the wall.

The floor is at present lower than the ground level of the Court, and there are unmistakeable signs that water stands within the masjid to the depth of a foot or more in the rains, over the mud accumulation; but this is certainly due to the rising of the outer court from fallen debris and not to originally faulty design.

Detail plan and sections of the masjid are desirable inasmuch as the domes are yet intact, but this can scarcely he done without removal of rubbish and the erection of scaffolding. Rupees 50 would probably he sufficient for the purpose.

On the road to Majlis Dighi, in the court of a village hut in Muhalla Telpatti is a fine inscription No. 211 of the Bengal list; no one would tell where it came from, but it has certainly been brought from the masjid near, known also as Majlis Sahebs Masjid. This masjid was the finest masjid in Kalna, measuring nearly 50 feet in length by nearly 40 in breadth. It is of brick picked and strengthened with stone. A course of stone (a dark colored

granite) runs right round the masjid through the entire thickness of the walls at the springing of the arches; this was obviously used to distribute the pressures of the arches more evenly and prevent unequal settlement, and it has I believe materially helped in arresting the destruction of the brickwork by crumbling away piece meal; the stone is apparently taken from some older building, as some of the slabs are smoothly worked, while others bear chisel marks: It appears that these not exactly fitting their positions, were cut to suit, and as the masjid was covered with plaster, and as the architects of the Muhammadans seldom took the trouble to smooth the surfaces of the stones they cut they were left somewhat rough.

The front facade as well as the end of the masjid are broken up and the dead flat of a straight surface relieved by square headed projections at each opening, each opening being as it were cut through a rectangular frame, projecting in advance of the general lines of the walls, and these projections are ornamented with sculpture in cut brick: in addition to these; four octagonal towers adorn the corners; these are divided off into three stages by cornices, the lowest running just above the springing of the arches, the next at the level of the top of the projecting doorway frames: the towers are profusely ornamented with sculpture in cut brick; they appear to have been surmounted a little above the level of the top curved cornice of the building by small domes in the manner of the Gaur ones, but of course only slight traces of these domes now exist. The facade in front contains three openings and the ends two openings, these however being closed by lattices of cut and ornamental brick. The openings in front which were apparently open are roofed over by cross vaulting, that is to say, the ridge of the vaulting over the deep jamb or portion of the opening within the thickness of the wall, running at right angles to the ridge of the arches which are seen in front exteriorly and the counterparts of which cover the opening interiorly, but the side latticed windows are covered by tunnel vaults or a prolongation of the arching which is seen exteriorly and runs through the entire thickness of the wall to the interior surface. The walls are five feet thick, and the corners of the jambs, of both the front entrances and the side latticed windows are ornamented and strengthened with stone pilasters flush with the jamb surface.

The interior which measures 36 × 24 is divided down the centre by a row of 2 pillars in the middle and 2 pilasters at the ends, pilasters also occupy the corners and the centres of the spaces between the 3 openings in front and the 3 niches in the back wall, there are thus two whole pillars, 6 half or pilasters, and 4 quarter or half pilasters, which supported gothic shaped arches, judging from the fragments that remain: and these arches supported

6 domes, all are now fallen. The domes sprang from solid pendentives which gradually projected out by corbelling from the corners, in alternate flush and serrated courses.

The interior was profusely decorated: the faces of the arches were ornamented with a fine geometrical pattern cut in relief, the pillars were 16 sided ones, (at least such portion as is now visible above the debris is 16 sided) elegantly exquisitely ornamented with chains and bells sculptured in bold relief, and therefore presumately taken from some demolished Hindu temple, but the glory of the Masjid were its prayer niches; these are inferior only to the Adina ones in superb profusion and taste of ornamentation: the side ones are 7 cusped and profusely decorated with cut brick patterns, the sides of the niches being of stone. The central one is of stone; its facade being a trefoil of exquisite grace and the surface of the projecting arch covered with rows of diamonds, strings of pearls (in stone) festoons of leaves, and a trefoil leaf edging: the spandrils are ornamented with 2 lotuses each, springing from a divided stalk, which itself rises from the side pillars, also of stone, which support the ends of the trefoil arch: the interior of the semicircle of the prayer niche is cusped and carved into tall trefoil headed panellings.

But the accumated rubbish on the floor hides from view the greater portion of the niches; and of course renders all measurement for drawings to scale impossible, it is extremely desirable that this rubbish be removed, and probably Rs. 50 will be enough.

The Armenian Church in Chinsurah is of interest as being one of the oldest Christian Churches in India. The inscription over the doorway Bengal list No. 213 gives its date of erection as 1695, it was built apparently by Katchik son of Peter, whose name appears on a brass tablet at the foot of the raised platform on which stands the altar; the date of his death is doubtless given in the tablet, but during the two hundred years, repairs and a layer of marble have so raised the floor as to bury part of the tablet and it is not possible without injury to it to get at the rest of the inscription. (Inscrption. No. 215 Bengal list.)

This man Peter's name occurs in the History of Julpha in Persia as one of the chief merchants, there is however no record of his having ever come to India. It is recorded however that the accession of Shah Suleiman to the Persian throne (known as Shah Sufi) in 1665 who gradually increased the burdens of taxation and of other irregular demands (among them of 2 girls annually) drove many of the inhabitants to seek their fortunes in foreign countries, and a powerful impetus was given to the exodus by the conclusion of a treaty between the Armenian Merchants of

Julpha or Ispahan and the English E. I. Company, dated June 22nd, 1688, by which free permission was given them to dwell within the Company's possessions, to travel by their vessels, share equally with British Merchants in any profitable investments, and to be eligible for employment in positions of responsibility and trust the same as British born subjects; it must have been some of these merchants who traded in India.

The tomb stone now placed in the centre of the floor under the steeple was originally at the foot of the altar, but in the course of some repairs about 12 years ago, it was found necessary to remove it and it was placed here originally as a temporary measure, but here it has since stayed: it records see Inscription No. 214 Bengal list, the death in the Armenian era 1145 corresponding to A. D. 1697 of one Marcus (Mark) a respectable merchant of Julpha who had travelled much and who was the son of Garib Khoja of Shosh city, also a merchant of good fame, praiseworthy and respectable.

The inscription was written by the then Priest of the Armenian Church, Gregory who was no doubt the first priest who officiated in the newly built Church at Chinsurah.

Of the numerous other tomb stones, in the Churchyard which is also the graveyard, none are of any importance or interest except to their descendants.

The Architecture of the Church clearly indicates European design, probably it was designed by the Portuguese who had sometime ago settled in Satgaon, close to which in Bandel they had built a Church in 1599 A. D. the Architecture calls for no remark being of the usual common-place style prevalent in Calcutta. The steeple of the belfry is however later, having been built, as attested by an inscription Bengal list 216 in A. D. 1829 by Sophia, wife of Semeon Phanus Bagram in memory of her husband.

The adjacent Roman Catholic Church of Chinsurah is seen from the inscription to have been built in A. D. 1740.

BHAGULPUR DIVISION.

The places visited in this Division are 1 to 19, 21, 22, 79, 80, 100, 101, 109, of the list as published and additional Nos. 113, 114, 115.

The district of Bhagalpur forms part of what was known as Anga, of which the first king was Anga (after whom the district was named) the reputed son of Bali the 12th in descent

from Anu who was the 4th son of Yayati. From Anga the first king, whose capital however is not known as Champa but as Malini, Champa Raja the founder of Champa (the Champa Malini of the Bhagavata puran, also known as Champapuri and Champanagari) was the 8th in descent, and consequently the 21st from Yayati.

In all attempts to fix early Indian dates there is but one fixed point, the reign of Chandra Gupta. This Duncker places at 315 B. C. Cunningham places the accession of Asoka at B. C. 264, and consequently as Bindusara and Chandra Gupta reigned altogether 52 years (48 years by another account the Matsya Purana.) We get to 316 B. C. as the accession of Chandra Gupta. I accept 315 B. C. as an easily remembered date.

From Chandragupta upwards, the evidence is very conflicting. It has become fashionable to bepraise every thing Buddhistic and suspect every thing Hindu but as there is not the shadow of a doubt that the Buddhistic Chronology before Asoka has been intentionally and deliberately tampered with (Turnour, Cunningham, and even the latest writer Duncker, all admit this.) I fail to see why, in face of this known falsification of the Buddhistic Chronology, we should persist in following it, the more so as I hope to shew that Hindu Chronology gives results quite consistent. I therefore reject Duncker's finding of the date of 1283 B. C. for the accession of Brihadratha, the first of the Barhadratha Dynasty of Magadha.

By the Puranas, the Nandas who preceded Chandra Gupta reigned altogether 100 years. The Buddhist records say Susanago, on the deposal of Nagadasoko, reigned 18 years, followed by Kalasoko 20 years followed by his 10 sons, whose reigns amounted altogether to 22 years; these again followed by 9 who reigned also 22 years. Making a total of 82 years from the deposal of Nagadasoko. Nagadasoko reigned 24 years, preceded by his parricidal father and grandfather, who reigned altogether 8 years, and were preceded by Ajatasatru's son who reigned 16 years; making a total of 130 years from Chandra Gupta to Ajatasatru's death.

The improbality of this is evident: Ajatasatru's son murders his father, and is murdered by his son; and this process continues down to Nagadasoko's accession; that is to say the 5th generation from Ajatasatru ascends the throne within 24 years of the death of Ajata Satru and each of the 4 is old enough to murder his father! could absurdity go further?

The Vishnu Purana says, that, from the beginning of the Kaliyuga to the accession of the first Nanda, a period of 1015 years had elapsed: the traditional beginning of the Kaliyuga

was the accession of Parikshit; or to be more definite, the era referred to as the Kaliyuga by the Vishnu Purana which defines its Kaliyuga as the accession of Parikshit by saying "at the birth of Parikshit, they were in Magha, and the Kali age then commenced."

Whatever discussion there may be therefore as regards the identity of the astronomical Kaliyuga and the Kaliyuga as distinctly defined by the Vishnu Purana, there can be none, that from Parikshit to the first Nanda according to the Vishnu Purana was 1015 years and consequently to Chandra Gupta 1115 years, (*i. e.*), the birth of Parikshit took place in 1115 + 316 = 1431 B. C. Duncker gives 1418, but I cannot follow his reasoning; his later dates of 1328 and 1175 B. C. for the accession of Brihadratha Jarasandha's father are obviously inconsistent with either his date of 1418 B. C. or my 1431 B. C. as the date of Parikshit's birth.

As Jarasandha of Magadha was killed by Bhimasena a few years before the great war and the birth of Parikshit, his death may on this calculation be in round numbers, placed at 1450 B. C.

But from Jarasandha to Chandra Gupta the Puranic lists give in almost unbroken hereditary succession 46 Kings. Consequently 46 Kings reigned 1450 – 316 = 1134 years; giving the very reasonable period of 24·6 years to a reign, where the reigns are almost all in hereditary succession.

But Karna of Anga was a contemporary of Yudhistira, and was made King of Anga by Duryodhana, at the trial of arms just before the first exile of the Pandavas, during which Jarasandha is killed. Consequently Karnas accession cannot be placed more than a very few units of years prior to 1450 B. C. As absolute accuracy is unattainable, Karnas accession may safely be placed at 1450 B. C. in round numbers.

From Karna to Anga is 20 generations. Karna being the 21st from Anga: applying now the just found period of 24·6 years per generation, Anga's accession will fall to 1450 + 492 = 1942 B. C. that is the foundation of the Kingdom of Anga dates approximately to 1942 B. C.

From Anga to Yayati is 13 generations, (*i. e.*), Anga is 13th in descent after, and the 14th in reign from, Yayati. Therefore Yayati's accession must be placed 1942 + 320 = 2262 B. C. in round numbers the accession of Yayati may be placed with reasonable probability at 2250 B. C.

Dasaratha gave his daughter Santa to Romapada to be adopted, as he had then no son; she was married to Rishya Sringa, Romapada subsequently got a son Chaturanga.

Romapada was the 6th King from Anga, his accession would be therefore 5 times 24·6 years subsequent to Angas that is 192 — 1243 = 1819 B. C. and his son's would be about 1785 B. C. Rama Chandra was the contemporary of both. Rama's accession must consequently be placed somewhere about 1800 B. C. But this by the way.

Champa the founder of Champa-Nagar or Champa-Malini or simply Champa, was the great grandson of Romapada, the father-in-law of Rishya Sringa: as Romapada's accession took place about 1819 B. C. Champa's accession must be dated to 1819—49 = 1770 B. C. in round numbers.

I do not think we have data to approach the real date with greater accuracy. I consequently place the foundation of Bhagalpur town at 1750 B. C. in round numbers.

Of course it will be understood that I refer to ancient not the modern Bhagalpur.

I would in passing remark that taking the Solar list as given in the Hindu Puranas from Rama, and working upwards to Manu Vaivaswat who had no human father, the period of Manu Vaivaswat comes to about 4500 B. C. a period which agrees with the generally accepted Biblical record of the age of Adam to within an eighth.

Remembering the method of calculation adopted, the coincidence is certainly to say the least remarkable.

I am fully aware that as it has grown to be a fashion to exalt Buddhism and the various other isms of recent origin, it has become equally the fashion to ridicule the Biblical record; such a procedure is unscientific in as much as before rejecting a venerated tradition, which has the evidence of ages of tradition in its favor, and is corroborated in many points, not only by independent, though also traditional evidence, but in some cases by recent Archæological research, and monumental evidence, it is at least necessary, that something more than the mere ipse dixit of men, who, however eminent in their own scientific spheres of research, are wholly unappreciative of the History of Man not as an animal, but as *MAN, with the living soul breathed into him* by an Almighty Creator; should be brought forward.

This kingdom of Anga appears to have been bounded on the West by the Magadha Kingdom; on the North by the Ganges, and also in all human probably on the East; on the South, I should feel inclined to fix its boundaries at the Damuda River, following here Cunningham's boundary of the kingdom of Champa in Hiouen Thsang's time. On the west, it is evident from the Ramayana, that Rishyasringas hermitage was within the Anga

kingdom. As this hermitage is traditionally situated in the Kharakpur. or Singhol Hills and known to this day as Sringi Rikhi (see Vol. VIII. p. 127 Arch. reports) the boundary betwen Anga and Magadha must have been the Kiyul (ancient Rishikulya river, with its sources in the Saktimati range see Arch. rep. VIII. 124, 125).

The capital of this kingdom appears originally to have been a city called Malini, which must have been very close to Champa; as Champa when founded by Champa raja was known (as we find from the Bhagavat puran) as Champa Malini.

As Champa raja's accession took place about B. C. 1760—and as the accession of Brihadrathas father Vasu, must be placed 74 years before Jarasandhas death in 1450 B. C. (*i. e.*) in 1525 B. C. it would appear that Champa founded in 1750 B. C. must be an even older city than Girivraja, which the Ramayana says was founded and so named by Vasu,

"And Vasu bade his city fair
The name of Girivraja bear."

The difficulty here is that as Rama lived about 1800 B. C. Viswamitra could not possibly have related to him anything of Vasus doings.

It will be seen from Arch. rep. Vol. XIII p. 57 that the limits of the Ayodhya Raj in Dasarathas time extended right down to the South end of modern Sirguja.

Vasu the father of Brihadratha of Magadha, conquered by order of Indra the country of Chedi, and is known as King of Chedi: his real name was Uparichara, called also Vasu he had 5 sons whom he installed governors; (and they after his death "planted kingdoms" and "towns in their own names and founded separate dynasties that lasted for long ages." Of these, one was Brihadratha, King of Magadha; doubtless therefore another son must have been King of Chedi and so on. Vasu's empire must consequently have extended from the Western boundary of Anga to the Western confines of Chedi or Tripura (which has been identified with Tewar near Jabalpur), and from the Ganges to Rayapura in the Central provinces, and must have included Sirguja as well as Magadha and the modern Shahabad, with Riwa and the upper half of the Central provinces: and it would have been absurd for Viswamitra to inform Rama on the banks of the old Son that

"This fertile spot on which we stand
Was once the high souled Vasu's land"

for Rama must, ever since crossing the Ganges, have been travelling on that same "high souled Vasu's land." Further as Vasu's

domains were parcelled out between his 5 sons who founded dynasties which lasted for "long ages," it would have been impossible for the territory of Dasaratha to have extended down to Sirguja, which would have been part of the Kingdom of one or other of Vasu's descendants.

Lastly the real name of Vasu was Uparichara.

It is therefore clear that the Vasu mentioned in the Ramayana as the founder of Girivraja, was quite a different king from Vasu Uparichara the father of Brihadratha.

Nor is there much difficulty in finding the real Vasu, the founder of Girivraja. Although Griffiths translation says nothing about it; Vasu the son of Kusa of the Lunar race (Kusa being the great great grandson of Jahnu, and the 9th in descent from Pururavas, the grandfather of Yayati by his 3rd son Amavasu, Yayati being his grandson from his first son Ayus) is in the Ramayana itself, distinctly mentioned as having founded Girivraja; not Uparichara Vasu the son of Kritaka of another branch of the Lunar race.

As Yayati's accession has been assigned to the rear 2250 B. C.; his grandfather Pururavas must be placed at 2300 B. C. and therefore Jahnu the 5th in descent from him must be placed at 2177 B. C. and Vasu the 10th from him at 2004 B. C. that is the foundation of Girivraja may he ascribed in round numbers to B. C. 2000. Champa consequently it appears was founded, nearly 2½ centuries after the building of Girivraja.

The accession of Jahnu has been placed above at 2177 or in round numbers 2200 B. C. and the performance of his austerities, during which the river Ganges overflowed his place of worship, may well be placed 25 years earlier, *i. e.*, at 2225 B. C. It was then that he met Bhagiratha the ancestor of Rama Chandra.

To test the accuracy of the dates assigned above to the various personages, I shall compare the date of Bhagiratha, derived independently, with that of Jahnu.

Bhagiratha was the 20th ancestor of Rama Chandra, and the son of Dilipa., but he was born the Ramayana says after Dilipa's accession to the throne, and did not meet Jahnu till he had already, not only commenced to reign, but had abandoned his kingdom and had succeeded in bringing the Ganges down.

Dilipa's accession would be according to the calculation from Rama, 1800 + 516 or 2316 B. C.; and Bhagiratha was born after his father had been some time reigning, and was old enough to succeed to the Empire on Dilipa's death: his accession therefore

cannot be placed earlier than about 2280 in round numbers. As he only met Jahnu after he had reigned and abandoned his kingdom in pursuit of Ganga, the meeting must have taken place say about 2250. Which agrees fairly well (remembering that the calculations are based on averages only). with the 2,225 B. C. which has been arrived at from the calculations for Jahnu on the basis of the puranic genealogy of the Lunar dynasties.

Before taking leave of this portion of the report which deals with dates, it may be of interest to point out, that the average of 24·6 years per reign in *continuous hereditary succession* of several regins is not uncommon. Taking the reigns of the Mughal Emperors, so long as it continued a direct hereditary succession, that is from the accession of Babar to the accession of Jehandar Shah; the period is 186 years; during which 7 generations ruled, giving an average of 26·6; which is even more than that deduced from the Puranas: including the reign of Jahandar there are 8 generations who riegned of 186 years; or an average of 23·4 years per generation; so that, for India, the average of 24·6 years per generation, is not too much. In Europe I believe 30 years per generation is regarded as a fair average, but there is an impression of the average 24·6 being high for *India*, to which Duncker gives expression, when, after calculating on an average of 25 years, he goes on to calculate on an average of 15 years per reign, with the remark, that it is "an average usually correct in long lists of reigns in the East;" forgetting, that the *reigns in question are also generations.* Where the reigns are not also generations I freely admit that 25 years is a great deal too high an average, but the Puranic lists of reigns are at the same time, with *rare* exceptions, lists of regular genealogical succession; and the average of 25 is not too high; indeed it has already been shewn, that it is not high, even so late, and for such troubled times, as the last 300 years; and the consistency of the results above deduced, on different and independent lines, from the use of the average of 24·6 gives a fair presumption of the applicability of the average, and of the credibility of Puranic genealogy.

Bhagalpur anciently Champa, Champa-Malini, Champavati Champapuri Romapadapuri (from Lomapada or Romapada,) Karnapura; is mentioned in Buddhist records. Turnour extracting from the "Buddhawansadesana" one of the sub-divisions of the Suttapitaka of the Pita Kattaya, says of the 8th Buddha, Padumo.

"Padumo born at Champayanagara, parents Asamo Maharaja and Asamadevi; his Bo tree the Sonaka. Gotamo was then a lion, King of Animals."

In Rhys david's translation of Buddhist Jatakas, Champa is also mentioned as the birthplace of Paduma. "Now the city of Paduma the blessed one, was called Champaka, his father was Paduma the king, his mother Asama; Sala and Upasala were his chief disciples, Varuna his serviter Rāmā and Uparāmā his chief female disciples, the crimson tree his Botree."

In the list of kings, Beals Romantic History of Buddha p. 18 "Two thousand five hundred descendants of the last successor of the Dynasty 'able to destroy' lived at Champa."

It is also mentioned as Champa in Jaina records. The Kalpa Sutra records, that their last heirarch Mahavira, passed 3 rainy seasons in "Champa and Prishtha Champa" the record is very valuable, as shewing, that the city of Champa occupied both banks of the Chandan River; for I can only interpret Prishtha Champa the city to the Prishtha, or back of, Champa, as a suburb close to and yet in someway separated from, Champa; a condition fulfilled by its being separated from it by the Chandan River. And in this supposition I am confirmed by the actual existence of one large mound and several minor mounds across the little Chandan River: the small mounds are certainly of brick, as fragments lie scattered; the large mound needs exploration: remembering that Champa is one of the oldest cities in Bengal, the importance of careful, extensive, and as far as possible through, exploration by trial trenches; the only method short of a very expensive thorough excavation, by which the exploration can he made with any hope of arriving at results of interest; appears to me so desirable, that I urge it for the favorable consideration of the Director-General and of Government.

As the Kalpa Sutra was written about B. C. 300. (Professor Jacobi) it is clear that at that date certainly, and probably during the period of Mahaviras existence in the 6th century B. C. this suburb of Prishtha Champa actually existed; and indeed it must as a village have continued to exist down to our own times. The profusion of names "Champa, Champavati, Champapuri, Champanagari, Champa Malini" besides the names Lomapadapuri, Karnapuri and Karangarh, points to the existence close to each other, of more than one city which could exclusively claim a monopoly of all the variants, and the actual existence of two villages, on opposite sides of the Chandan, called Champapur and Champanagar, which exist to this day, together with the actual existence of mounds of ruins across or to the west of the river, as well as of undoubted ancient remains on the East side of the river, appear to me to completely establish the fact of the existence of a great city, divided through by the Chandan River, of which the eartern portion now known as Champa-

nagar would correspond to ancient Champa, Champanagari, Champa-Malini, while the western portion near which is the village of Champapur, would appear to mark the site of Prishtha-Champa and Champapur.

Legend and tradition also mention the existence of a Champapur in connection with the romantic story of Champeli Rani of Champapur, who was so unfortunate, that every man she married, died on the wedding night, being dragged a corpse out of the bridal chamber; till at last as no one would marry her voluntarily, it was made a sort of a tax on the people, one husband being provided for her by lot daily, in hopes that at last, some one would come out alive, but without success; till a prince from a distance who had heard of her dazzling beauty and her misfortunes, determined to risk his life voluntarily. By a fortunate accident, he heard a warning in these words "Champapur Champeli Rani, jage to pawe, sowe so khowe" (*ie*) Champapur Champeli Rani, who keeps awake wins, who sleeps loses her.

It need hardly be added that the appearance of a voluntary suitor of high rank and handsome appearance was a joyful event in Champapur. The ceremony performed, and the pair carried to the bridal chamber, the words of warning occured to the prince, who with drawn sword sat down to watch through the night: to his horror he saw a venomous snake issue out of the beautiful princess' mouth and advance to attack him, which he with his sword cut into pieces after a desperate struggle, and at last fell into a deep sleep exhausted, but safe: in the morning the accustomed Dom arrived at the chamber door to drag the corpse out, but on breaking open the door, the prince was, to the joy of his father-in-law, and of the country, found alive; and the heap of cut up fragments of the serpent explained the mystery; needless to add the wakeful prince lived happily ever after.

The era of most of the indigenous stories appears to have been about the 9th century, at which time therefore Prishtha Champa or Champapur must have been still in a flourishing state. And probably contained the Royal residence.

The Dasa Kumara Charitra mentions Champa, though in far from a complimentary manner, as a city full of rogues, a character also given it by the common saying "Bhagalpur ka bhageliya aor Kahalgaon ke thag."

From the Dasa Kumara Charitra we learn that Sinhavarmma was once a King of Champa and that Champa was beseiged and taken by Chandavarmma; it had evidently then a fortress capable of standing a siege; the Dasa Kumara Charitra is supposed to have been written about the 11th Century.

The Dulva (Journ. As. Soc. I.) mentions Champa as one of the 6 Chief cities of India.—

Colebrooke in Transactions of the Royal As. Soc. says that Vasupujya one of the Jain heirarchs died at Champanagar in the reign of Dadhivahana Raja who lived at Karna.

Turnour extracting from the Dipavanso (Journal Asiat. Soc. VII.) in detailing the succession of Kings of the present kalpa says that Mahindo and his 12 descendants reigned in Champakanagara, a variant of Champanagar.

It is therefore clear that the capital of Anga continued to be Champa, from the earliest dawn of tradition down to the 11th Century; which so far as I can remember, is the last mention of Champa as a great city, and the capital of a Kingdom, for there is strangely enough, no mention of Champa; in the invasion of Bengal; by the Muhammadan historians.

Champa is also described by the Chinese travellers. Fa Hsien's account is interesting; he says. "Following down the river Ganges in an easterly direction for 18 yojanas distance, we find the great Kingdom of Tchenpo (Champa) on its Southern shore. In the place where Buddha once dwelt, and where he moved to and fro for exercise, also where the four previous Buddhas sat down; in all these places towers have been erected and there are still priests resident in them. (Beals translation p. 191-129. Gile's translation as regards Champa is substantially the same)

Hiouen Thsang gives a longer account, and one of greater interest as he gives the legend of the foundation of Champa, which it need hardly be added is utterly different from the Hindu account; it is of interest however as proving, that among the Buddhists the antiquity of Champa was supposed to be even greater than that of Rajagriha, for he says of it "this was the capital of the country of one of them, and the first of all the cities or Jambudwipa; I extract the entire passage as it is of great interest.

"This country (Champa) is about 4000 li in circuit. The capital is backed to the North by the River Ganges, it is about 40 li round. The soil is level and fertile (fat or loamy), it is regularly cultivated and productive; the temperature is mild and warm (moderately hot); the manners of the people simple and honest. There are several tens of Sangharamas, mostly in ruins, with about 200 priests. They follow the teaching of the Little Vehicle. There are some twenty Deva Temples which Sectaries of every kind frequent. The walls of the capital are built of brick and are several tens of feet high. The foundations of the walls are raised on a lofty embankment, so that by their high escarpment they can defy (stop) the attack of enemies. In old

times at the beginning of the Kalpa, when things (men and things) first began, they (ie) people inhabited dens and caves of the desert. There was no knowledge of dwelling houses. After this a devi (divine woman) descending in consequence of her previous conduct was located amongst them. As she sported in the streams of the Ganges, she was affected by a spiritual power and conceiving, she brought forth four sons, who divided between them the government of Jambudvipa. Each took possession of a district, founded a capital built, a town and marked the limits of the frontiers. This was the capital of the country of one of them and the first of all the cities of Jambudvipa."

In the interval however between Fahian and Hiouen Thsang, Buddhism in Champa appears to have declined, for while Fahian mentions the existence of several distinct temples, to which in his time important traditions attached; as the Temple on the spot where Buddha once dwelt; that, where he took excercise; and that, where 4 previous Buddhas sat down: Hiouen Thsang only says that "there are several tens of Sangharamas mostly in ruins." As Hiouen Thsang is particularly careful to give us every detail of the various holy shrines he visited, with their legends if any; the absence of all mention of the names or legendary holiness of the Champa ones, with the statement of their being "mostly ruins"; shew that the traditions attaching to the buildings noted by the earlier traveller had perished, and the buildings themselves gone to ruin, when the later traveller visited them. There is however mention by Hiouen Thsang of the fort, and his description is correct so far as I can judge without excavations. It evidently applies to the fort of Karnagarh, the earthen ramparts of which where now almost level with the general surface of the ground within the fort, still tower 50 feet above the surrounding fields outside, and which consequently, when intact, must have been "several tens of feet" high.

That the fort stands on a mound, there cannot he a doubt, though how high the mound was, it is not posible to ascertain without excavation. Hiouen Thsang says it was artificial; if so the mound; remembering that Hiouen Thsang's visit was made in the 7th century, must have been, not a specially built mound, but the ruins of Karnas famous city Karnapura, judging from the name still attaching to the spot; examination of the fort so far as it can be done without trial trenches, shews the walls to have been built of Bricks 18 inches long 12 broad and 3 inches thick, thus placing the buikding of the fort (in the absence of all other evidence except that of the size of the bricks,) in the quarter millennium about the beginning of the Christian era. But as there is not the shadow of a doubt regarding the continuous existence of Champa from the 18th century B. C. downwards as

the Capital of Anga, and as from the name of the fort, the probability is strong that it occupies the ruined mound of the older site of Raja Karnas fort of the 15th century B. C. the earlier remains, if any exist, have to be looked for by deep trial trenches.

As one of the cities in Bengal known with absolute certainty to date to the pre-Asoka period, and furthur in view of the almost absolute certainty that in the mound on which the present ruined fort of Karangarh stands, we have the ruins of Karnas city, and that it is not easy in any other site that I can think of, in Bengal, to fix with such absolute precision, the actual spot where the ruins of a pre-Asoka capital city stand, for the ruins of Gaur and of Girivraja are a great deal too extensive for such precision, the precise site of the capital of Kalinga is yet a matter of doubt, Mithila has not been seen by me, and is besides within the Nepal frontier, and therefore inaccessible, and the greater part of Pataliputra (indeed the entire city except perhaps the southern strip) has long ago " fallen in" into the river as the Chinese records tell us (and the little there is is not available for exploratory trenches) I consider Bhagalpur and particularly Karangarh, to be the spot, where, if any where, if any where in Bengal, successful exploration may bring to light, the remains of one of Indias *OLDEST CAPITAL CITIES.*

It would be strange indeed, if a capital city so well known, and which enjoyed such a continuous existence, should not be mentioned by the Western Geographers. Yule, with correct intuition, has identified it with Kartinaga, although it is clear from the note of interrogation following his words, " Kartinaga Karnagarh near Bhagalpur an ancient site ?" that, although a happy inspiration led him to the identification, he had no very tangible grounds to go upon. Those tangible reasons, have now I hope, been furnished in profusion.

It is of interest to note, how traditions linger on in modified forms, and are passed on from religion to religion. One of the synonyms of Champa, the Capital of Anga, is Lomapadapuri, so named from Romapada or Lomapada, the father-in-law of Rishyasringa the seduced hermit ; Lomapada was so called, because he had hair growing on the soles of his feet. He lived about the end of the 19th century B. C. The legend however of the hairy foot reappears in Buddhist tradition, where Sona, the rich merchants son, is said to have had hair growing on the soles of his feet ; (see Spence Hardy) " red hairs turning towards the right ;" the legend is repeated in a somewhat altered form by Hiouen Thsang (Beals transl Vol. II p. 188.)

That the original tradition belongs to the Hindu legend, is, apart from all question as to the comparative antiquity of the

Ramayana and of the Buddhist legends, settled by the circumstance that the legend of the hairy soles of the feet may have been intended to account for the name Lomapada which occurs in the Hindu legend; as we know in several other instances, ingenious stories having been invented, to account for other names; notably the name of Vikramitya Gardhabhila; but that it does not explain, and cannot account for anything in the Buddhist legend. But if the original tradition, thus accounting for a Hindu legend, is therefore clearly attributable to it in the first instance, its occurrence in the Buddhist legend, where it is as it were "in the air," and where there is, not only no reason for bringing in the legend of any hairy footed being, but especially none, for attributing it to an inhabitant of the very Champa, where Hindu traditions place *their* hairy footed king; stamps the Buddhist tradition unmistakeably, as an adaptation of an older, and pre-existing tradition, too well known, and too firmly beleived, to be ignored or totally discredited, yet too closely connected with a cardinal belief of the Hindu religion, to be safely adopted by the new cult, without such modification, as should render it totally harmless for the encouragement of even a partial faith in the older cult. Of the political histry of Champa prior to the Christian era little is known.

The Kingdom of Anga was founded by Anga, son of Bali Raja, who was evidently a very powerful king, as his 5 sons became kings of the 5 kingdoms in Eastern Bengal. Bali appears in fact to have been one of the great kings of East India, and his kingdom extended from the Kiyul, and the Kosi rivers, eastwards to the western limits of Tripura; (Tipara) and from the foot of the Himalayas, to Ganjam on the south.

The limits of Anga's kingdom, which became a separate kingdom, about 1950 B. C. have been already defined. It must have ceased to be an independent kingdom, for some time prior to Karnas reign; judging from the description of his adoptive father Adhiratha, advancing as an humble, and poor charioteer, with tears of gladness streaming dawn his eyes, at the great success of his son Karna, in Duryodhana's games, held before the first exile of the Pandus, I cannot suppose that he was an independent reigning king; rather it would appear, that Vasu, the great king, whose grandson Jarasandha, the monarch of only a fifth of his fathers empire, became so formidable; had conquered Anga, and added it to his already extensive empire. In this I am confirmed by the circumstance, that Vijaya, the great grandfather of Satya Karman, Adhirathas father, being born of a Sudra mother, would not, naturally, hold a very strong position in the esteem of his subjects; and either he, or his son, who were about contemporaries with the great Vasu, would offer very strong temp-

tation to a great powerful and certainly ambitious king, to annex his kingdom. I hold therefore that Anga ceased to be an independent kingdom, about the close of Vijaya's, or during his son Dhritis reign ; that is say, about a hundred years before Karnas installation by Duryodhana, as king of Anga, about B. C. 1450.

That in Karnas time, Anga was not independent, and Karnas adoptive father, was not a reigning monarch, are only too well established by the Mahabharat.

During this period of a hundred years, from the extinction of Anga as an independent kingdom, to Karnas installation ; the capital Champa, would naturally fall into decay ; and this would sufficiently explain, how it was, that Karna, whose reign fell in troubled times, and who consequently, would not have been likely to build a new capital if he found one ready to hand ; was obliged to build a capital, which became known as Karnapura.

The revival of Anga as a separate kingdom, with Karnapura as capital, appears to have been of short duration ; as the Vishnu Purana, which gives lists of the kings of the neighboring kingdom of Magadha, for many hundred years after the great war, closes its list of the Anga kings, with Vrishasena the son of Karna : probably the country became absorbed in Magadha. I would place the extinction of Anga, as a separate kingdom, in round numbers, at 1400 B. C.

What happened from this period down to the time of Buddha, can only he matter of conjecture, all that can with certainly he inferred, is, that Karnapura must have continued to exist, alongside of Champa, as a place of some note, to the earlier centuries of the Christian era, for the name to have found its way into Ptolemy's list ; at the same time Champa also existed, as a city of some importance ; for the father of Sona (of the hairy-foot legend in Buddhas life) is said to have possessed " thousands of houses" " surmounted by towers" in the city of Champa.

That Anga was part of the kingdom of Magadha, is seen from the story of Sona, in Spence Hardy ; where, on Bimbisara, the Magadha king's inquiry, as to the place from which such exquisitely scented rice had been procured, as Buddha was eating just after his recovery from illness in Raja Griha ; he is informed that it was from his " own city Champa." The same conclusion is inevitable from Hiouen Thsang's modified version of Sona's legend.

That it continued to be a dependency of Magadha, down to the reign of Vindusara, appears probable from the circumstance,

that Asoka's mother; Subhadrangi; a girl of extraordinary beauty, and of whom it had been foretold, that she was to be the wife of a king, and the mother of a universal monarch; was carried and presented to Vindusara by a brahman of Champapuri. She was no doubt treated at first as a slave girl, for the name of her son Asoka was so given because his birth emancipated her from her sufferings as a slave girl (Rajendra's Nepalese Buddhist Literature.) It is scarcely likely that the astute brahman would have carried her to a foreign king, if he had a king of Anga handy; and still less likely, that the king, if one existed at Champapuri, would have waited for the brahman to present her to him, or to deport her to a neighboring king, before carrying her off himself, with or without the brahman's consent.

Of the absolute certainty of Asoka's empire over Anga, as over the rest of India, no proof is necessary; how long after Asoka, Anga continued a dependency of Magadha, is however by no means easy to ascertain. If the episode of the seige, capture, and emancipation, of Champa and of its King, in the story of the Dasa Kumara Charitra, is founded or some real basis of truth, Anga must have regained its independence, at some period before the 11th century; though such independence must have been of a very temporary nature. The succession of the King of Anga and of its neighbouring Kingdoms, is so involved, that a brief statement of what is yet known of the successions of the paramount sovereigns, and of their successors in East and West Magadha will not be superfluous.

Starting then from Karna, in 1450 B. C. we have:

Kings of Anga ...	Accession of Karna ...	1450
	„ of Vrishasena...	1425 B. C.

In 1400 B. C. Anga became absorbed in the kingdom of Magadha, and so continued.

The accession of Brihadratha being placed at about 1500 B. C. We have 4 Kings of the Barhadratha dynasty reigning over Magadha alone, who with their dates of accession are:

Kings of Magadha only...	1.	Brihadratha ...	1500
	2.	Jarasandha ...	1475
	3.	Sahadeva ...	1450
	4.	Somapi ...	1425

The fifth, Srutavat, whose accession must be placed at 1400 B. C. was King of Magadha and of Anga also.

From Srutavat, downwards to Ripunjaya, the last of the Barhadrathas; are 20 reigns, equal to, in round numbers 490 years, at 24·6 years to a reign; bringing the extinction of the

Barhadrathas to about 910 B. C. (I refrain from giving a list of the 20 Kings, which may be found in the Vishnu Purana, and elsewhere). Or, working backwards from Chandragupta, the extinction of the Barhadrathas, and the accession of the Pradyotas, must be assigned to 915 B. C. more accurately.

From the Vishnu Purana, it is known that the 5 Pradyotas reigned 138 years: that is to 777 B. C. Therefore the accession of the Sisunagas must be placed at 777 B. C. The 10 Sisunagas reigned 362 years; consequently, the accession of the Nandas, took place B. C. 415. The 9 Nandas reigned 100 years, bringing the accession of:

10 Mauryas, Emperors of India reigning 137 years. ...	Chandragupta to	...	315 B. C.
	Bindusara	...	291 „
	Asoka ...	...	264 „
	Suyasas or Kusala	...	223
	Dasaratha (of the Barabar inscription or Bandhupalita.)	...	215
	Saugata ...	...	205
	Salisuka ...	...	198
	Somasarman	...	190
	Satadhanwan	...	182
	Brihadratha	...	180

From the accession of Srutavat, to the death of Brihadratha the last of the Maurya dynasty, in 178 B. C., is 1222 years; during which Anga had ceased to exist, as a separate kingdom; although doubtless Governors on the part of the Paramount Kings, ruled the country; and probably from Karnapura as Capital. But as they were merely temporary sojourners in the capital, they would be little likely, to devote, either funds, or any special attention, to its embellishment, beyond keeping up the fort in a state of efficiency, and the old palaces they occupied habitable. During this long period of apparently peaceful rule, disturbed, so far as I can find, only by the rebellion during the reign of Padmachenpo (the Kshattraujas of the Vishnu Purana) when he was obliged to pay tribute, but by the advice of Bimbisara his son, he withholds, followed by a war, wherein Champa is annexed to the dominion of Magadha; analysis of the Dulva, Journal As Soc. Vol. I) trade would naturally flourish; and whatever the fate of the imperial palaces; private merchants, and money lenders, would go on growing rich; we accordingly find from Buddhist records, that Sona's father, possessed "thousands of houses" "surmounted by towers" in the city of Champa.

From the murder, in 178 B. C. of Brihadharatha of the Maurya dynasty, the Vishnu Purana fails as a guide to the political history of Magadha and Anga; for although the narrative

of the Purana is apparently continuous, and goes on to specify the 12 Sungas, and the 4 Kanwayanas, in what is an uninterrupted succession; there is little doubt, that the dynasty of the Sungas reigned only in Western India, and part of what is now known as the Central Provinces, and the Southern portion of Malwa, where numerous records of their rule exist: (in fact in the Malavikagnimitra of Kalidasa, Pushpamitra is mentioned only as a general; and his son Agnimitra as King of Vidisa or Bhilsa) but assuredly, they did not reign in Madhyadesa; which; except a rare coin of Pushpamitra, occasionally; contains no record of their reign. Even in Western India, Rudradama's inscription proves, that their successors the Satakarnis, of the Andhra dynasty, were far from being Paramount Sovereigns of India. On these grounds I feel constrained to decline the guidance of the Vishnu Purana as regards the successors of the Mauryas ruling over Anga and Magadha.

But if the Vishnu Purana fails us here as guide, there are other sources of information, to furnish beyond the shadow of doubt, a sketch of the political vissicitudes of Magadha certainly, and probably of Anga.

Taranath (my information is obtained from Cunningham's coins of Alexanders successors, part I. Article Menander, pages 258, et seq; the originals being not accessible to me) records an invasion of India by foreigners, during the reign of and 5 years before the death of, Pushpamitra; he specially mentions, that they advanced as far as Magadha. As Pushyamitra is obviously the Pushpamitra of the Vishnu Purana, and he died according to the Matsya Puran in 142 B. C. the invasion must have taken place in 147 B. C.

The Astronomer Garga, in the Gargi Sanhita, after mentioning Salisuka, goes on to say "Then the viciously valiant Greeks, after reducing Saketa, Panchala country, and Mathura, will reach Kusumadhwaja: Pushpapura being reached, (or taken) all provinces will be in disorder undoubtedly."

It is therefore certain, that Pataliputra was taken by the Greeks, under Menander, who reigned B. C. 100 to 140 B. C., and who assumed the wheel symbol of the Chakravartti Rajas or Paramount Sovereigns, as may be seen on his coins.

It appears therefore, that after the murder of Brihadhratha, and a brief period of troubled time, during which the rebel and regicide Pushpamitra, exercised some sort of rule over Magadha; the Paramount Sovereignty of Madhyadesa, passed to the Yavana Kings.

Let us now go back to the Vishnu Purana, which specifies 8 Yavanas as at some time or other rulers of India. Assuming that

these Yavana Kings refer to Menander and his successors, (and as there have been no other Yavana Kings; (for the Kaila Kila Yavanas have been already identified, see Cunningham arch Rep. Vol. XVII), we have no option but to accept this assumption or reject the Vishnu Purana entirely (as well as the Matsya Vayu and Bhagavata Puranas which here all corroborate the Vishnu Purana). We have the following names. (Cunningham's coin's of Alexander's successors):

Menander.	Apollophanes Soter.
Amyntas Nikator.	Telephus Euergetes.
Hippostratus Soter.	Hermæus Soter.
Artemidorus Aniketos.	

The last of whom Cunningham places about 140—120 B. C.; and several of them as contemporaries.

This however, will not satisfy the requirements of the Hindu Puranas, which unanimously record the reigns of 8 Greek Kings.

I do not profess to be able to solve, or suggest a solution of the difficulty. That Harmæus was succeeded by (or was at least joint ruler with) Kujula Kadphises, there appears absolutely no possibility of doubting; and the supposition of General Cunningham that the conqueror of Artabanus II and of Phraates, was this Kujula Kadphises, is at least as certain, for Khiu tsiu ki, the conqueror of Kophene and Parthia, the Kujula Kadphises of the coins, is the only Tochara conqueror of Parthia. But as Mithridates II, the successor of the defeated and slain Artabanus, instead of being defeated, was victorious over these Tochari, and not only drove them eastwards, but actually took some provinces from them; (at least Strabo's reference to his acquisitions can only be referred to this period) it is equally certain, that Khiu tsiu ki could not possibly have *reigned* fifty years after defeating the Parthians, and yet have retained the title of conqueror of Parthia: on the contrary, the Tochara King, who *ceded* provinces to the Parthian Mithridates II, could scarcely have been called the conqueror of Parthia. I am forced therefore to disagree with the opinion of my revered teacher, in refusing to consider Kujula Kadphises, as having reigned so long, that his sons reign must probably be fixed at 80 to 60 B. C.; rather I maintain; that Kujula Kadphises died, after his victory over Artabanus, and before the war with Mithridates II; (this does not however, necessarily imply the rejection of the Chinese record which fixes his age at his death at 84 years.) And that, it was his son, Yen Kao Ching, (who in the absence of a more likely name must be the Wema Kadphises of the Coins) who, driven from Parthia, was forced to put an end to the Grecobactrian kingdom, which appears for some time to have been

ruled over jointly by Greek and Tochara Kings; and, in the flush of success, to advance into India. How far they went what direction they took, are they the people who found their way down towards Guzarat? What is their relation to the Maha Kshatrapasas, and to the Shahan Shahi Devaputras? are all questions of exceeding interest, but quite outside the province of the Bengal Survey.

As a speculative theory I may say, that I have a conviction, that the expulsion of the Greek conquerors of India about 57 B. C., was the occasion of the establishment of the Vikrama Samvat.

Of course the attack by the Tokhari, under the Kadphisian dynasty, of the Greek Kingdom in Bactria, would amply explain the statement of the Astronomer Garga, that "the fiercely fighting Greeks, will not stay in Madhyadesa, there will be a cruel dreadful war in their own kingdom, caused between themselves." When the main strength of the Greeks had been drained away from India, by this war in "their own kingdom," the remnant would not have been so very difficult to expel. It is to their expulsion, and to the establishment of some other Paramount Indian Sovereignty, that I would ascribe the establishment of the Vikrama era, beginning 57 B. C.; but the records we possess, are yet too vague, for definite conclusions, nor is there much hope of Archlæoogical research in Bengal, throwing new light on the subject; though it is probable, that research in Malwa, and the Panjab, will give us fresh and unexpected light, on this exceedingly obscure period of Indian History.

But although a nameless king, whom tradition calls Vikramaditya, (which is merely a title and need not necessarily be a name and probably for this reason not found in the old Puranas.) established a new Era; presumably, according to my theory, by the expulsion of the Yavanas; his and his successors' sovereignty, lasted but a short period.

There is no lithic or numismatic, or even written record of a definite and reliable kind, of the universal reign of the King who established the Vikrama era; but tradition, all over the entire extent of Nothern Central and Eastern India, is so unanimons in ascribing to him universal sovereignty as a Chhatrapati raja; that it is impossible to ignore his reign. I consider therefore, even if this great King did not himself expel or help in expelling the Yavanas, that, after their expulsion as Paramount Sovereigns of India; the paramount power fell for a brief period, into the hands of a Chhatrapati King (Kshatrapasa of the Sah Coins) about B.C 57; and as a speculative theory, I advance the supposition, that the Khsatrapasa, and Mahakshatrapasa Kings, of whom the first

Nahapana, reigned somewhere about 57 B. C. but whose own inscription has not yet been found, (though coins have) is the Vikramaditya of Indian tradition, and that he was a Tochara or Yeuchi prince: in this connection I quote Edward Thomas' remarks on his Coins (Gupta dynasty p. 31 32.)

"The engraver or designer of this die, was evidently more conversant with the outlines of the Bactrian alphabet, than he was with the forms of the character of the concurrent system of writing of Indian origin. The repetition of the letters of the name of the King, in the latter alphabet, retain so much of the appearance of Bactrian writing, that at first, I imagined the line of the legend, followed uniformly on to the left of the Semetic version of the leading name; whereas there is an obvious break in the continuity of the legend, and a complete reversal of the run of the alphabetical signs, a system of definition equally maintained in the coin of Chashtana (No. 7) where, on the other hand, the Bactrian characters were subordinated, and evidently left to the mercies of Indian die-cutters trained in the conventional schools of their own land."

"It is interesting to observe the conjoint employment of the two local alphabets, in concurrence with the fading lines of the Greek, and the retention on both these coins, in a subsiding degree, of the Bactrian system of writing which marks its erratic spread into Surashtra, following probably the line of the Indus downwards from Bhawalpur, hitherto the lowest point to which its presence could be traced with any degree of certainty."

Of course Magadha and Anga, and all Bengal, acknowledged the sovereignty of this great King, whoever he may have been, for his tradition extends with a persistency, and a universality all over Northern India, which obtains for the reign of no other monarch of the post-heroic period; but the Paramount Sovereignty did not long remain in his dynasty: the establishment of the Saka era appears to me conclusive proof, that a new race (of Scythians) came into India, and wrested the Sovereign power for themselves about A.D 78. This new race of Kings must be the Kanishka dynasty of Indoscythian Kings; and instead of reckoning the dates of the Kanerki Sovereigns from the Seleucidan era, which they were most unlikely to have adopted, I would reckon their dates, in their own inscriptions, from their own era the Saka era; which none but they could have established, on their attainment of Suzerain power in India.

No better test of the result of doing this can he selected than their own inscriptions, which are numerous; and for convenience, I select the list of dates given by Cunningham (p. 43 Indian eras.) which give the earliest and latest dates of the inscriptions of each King.

Kings' dates from their Inscriptions.	Result by Vikrama era.	Result by Selencid era.	Result by Saka era.
Kanishka.			
Earliest date... 9	B. C. 49 . .	97- 98 A. D.	A. D. 87.
Latest do. ... 28	B. C. 30 ...	116-117 A.D.	A. D. 106.
Huvishka.			
Earliest date... 33	B. C. 25 ...	121-122 A. D.	A. D. 111.
Latest do. ... 51	B. C. 7 ...	139-140 A. D.	A. D. 129.
Vasudeva.			
Earliest date... 83	A. D. 26 ...	171-172 A. D.	A. D. 161.
Latest do. ... 98	A. D. 41 ...	186-187 A. D.	A. D. 176.

It is admitted that the Vikrama Samvat give dates too early, but I fail to see in what respect the Saka era gives dates less reliable than the Seleucidan or " too late" as Edward Thomas says in his Gupta dynasty page 17. The dates derived from the Seleucidan, are those which Cunningham adopts.

That the Greek dynasties of Ariana would adopt the Seleucidan era, can be well understood; but that a barbarous Horde of Scythians, who must have found the Greek kingdom *as a kingdom, already not existent*; (having been admittedly overthrown by the Kadphisean Tochari) should deliberately adopt an extinct era, with which they were unfamiliar, and which, for them, possessed absolutely no significance, is to say the least, improbable.

But when the Scythians are made to use an era, which presumably they had no concern with; (for as has just been shewn to be highly probable, the Vikrama era was the one in use in India, during the rule of their predecessors, the Mahakshatrapasa Paramount Sovereigns) and to leave unused, the one era, which, going by their name, ought to have been in use by them, nay to have been inaugurated by them; because an absurd record (Albiruni, Reinaud) says that the Saka era, their era, was established on their expulsion; I am reminded of the similar record, in regard to the Gupta era, by no less a writer than the same Albiruni: and in giving credence to the one, as to the other, a grave mistake has I believe been committed.

The error of Albiruni's statement in regard to the Gupta era, has been abundantly proved by General Sir Alexander Cunningham, who has nevertheless, fallen into an error, of precisely the sort, that he has himself exploded. It is not in a

spirit of cavil that I venture to differ from the opinion of one, at whose feet I have acquired such little beginnings of Archæological knowledge as I possess, nor do I underrate the authority of Edward Thomas; but there is now, no recorded instance (except the one under discussion) of any known era, having on its establishment, been named after an extinguished or outgoing dynasty; and there is no reason for supposing such a departure from universal practice, in the case of the Saka Kal.

That Edward Thomas and General Cunningham, have been led to adopt the Seleucidan era as the era in which the Kanerkian Scythic Kings dated their public records, is, as Edward Thomas says, due partly to the circumstance, that he (and I know from personal knowledge General Cunningham also) noticed, that though closely approaching to, yet, their dates never reached the 3 figure stage; whence he concluded, that they had adopted the slipshod Kashmiri method of omitting the entire hundreds in the dates of their public records: once admitting this, the adoption of the Seleucidan era gave the only results approaching probability; but it must be evident that the reason for the Kanerkian dates not reaching the 3 figure stage, was due to the fact, that their empire did not last long enough. Even Cunningham implicitly admits this, when he says, that, (Coins of Alexander's successors part II p. 28). "For some years he probably ruled in peace, until about B. C. 128, when the Su or Saka Scythians, under Vonones and Moas, being driven from Bactria towards the South, took possession of Kabul and Ghazni. I suppose that Hermæus may then have applied for aid to their powerful enemy the leader of the Tochari."

For if the Tochari and the Sakas were enemies, and the former expelled the Sakas and themselves advanced some way into India; (and there is no doubt of that) it is obvious that the Kanerkian Scythic dynasty cannot be a continuation of the Kadphisian Tocharic dynasty; they must stand by themselves, as an independent dynasty, and their founder so far as their Indian Sovereignty is concerned, would be the great Kanishka in 78 A. D., which would give for his first record of Samvat 9th dated in his own Saka era, the date 87 A. D. which agrees very well with Cunningham's own date of 97-98 A. D. derived from the Seleucidan starting point, and suits better, the last known date of this dynasty.

Remembering that Chandagrupta I, who initiated an era of his own in 166 A. D., must have been in some sort, a Suzerain Monarch of India; the throwing forward of the last Kanerkian date, from 176 A. D., which is obtained by reckoning it on the Saka basis, to 187 A. D., which results from calculating it on the Seleucid basis, is a wrong move. It is more probable,

that Chandra Gupta expelled the Scythians in 176 or 177 from Mathura, after having expelled them, and assumed the title of Maharajah Adhiraja in 166 in the Gangetic doab; than, that he should remain idle, till 187 or 190; to complete their expulsion. His scythic war lasting 10 years, is more probable, than its lasting 20 to 24 years; I think it therefore, very much more probable, that Chandra Gupta I expelled the Scythians from the Gangetic doab about 167 A. D., and inaugurated the Gupta era; completing their expulsion, probably on the death of Vasudeva, at the close of 176 A. D.

Summarising the results obtained so far, it appears, that, Anga and Magadha and in all probability Banga were ruled by Yavana Sovereigns for 90 years from 147 B. C. to 57 B. C.; then by the Chhatrapati (Maha Kshatrapasa) dynasty, (the Vikramadityic dynasties of Indian tradition,) from 57 B. C. to 78 A. D., 135 years; and from 78 A. D. to 125 A. D., 47 years by the Scythic Kanerkian dynasty: From 125 A. D., the Sovereignty so far as *Magadha and Anga are concerned* again passed to native rulers. The foreign domination accordingly lasted 272 years, in this part of India; but was not finally driven out from India till 176 A. D. that is after a total period of 323 years. In round mumbers the foreign rule lasted in India for 3¼ centuries.

I say 125 A. D., and not 166 A. D., because I place Maharajah Sri Gupta's accession at 125 A. D., for reasons which will be given further on, and because it appears to me that Pataliputra was the Capital of India at least as early as 250 B. C., and continued so down to Fahians time.

The embassy sent by Fan Chan King, of Foonan entered India by the Bay of Bengal and reached the Capital after ascending the Ganges 7,000 li *, * * The King who rules here has the title of Maou Lun" * * The Suburbs of the fortified City in which he resided "are watered by rivulets which flow on all sides and fill the deep ditches surrounding the City, below it flows the great river, all the palaces are covered with Sculptured inscriptions and other ornaments in relief, a winding street forms a market 1 li in length, the dwelling houses have several stories."

(Chinese accounts of India translated from "the deep researches into ancient monuments by Matwan Lin." Book 338 Vol. 14. J. A. S. Vol. 61. Lond Journal As Soc. for July-August 1836.)

The embassy was sent between 222 and 280 A. D., and the description is so clearly and unmistakably that of Pataliputra, that further proof is superfluous. Compare Hiouen Thsang and Fahians accounts, Megasthenes in Arrian and Cunningham Vol. XI. Pataliputra being the Capital of India as early

as 250 B. C. and continuing so, it is most probable that it was the Capital also of Maharajah Sri Gupta and if so it is evident that Maharajah Sri Gupta must have expelled the Scythian Governors from Patna, and from the East of Patna, before he could fix on Pataliputra as his capital; that is to say he must have driven them out of Anga and Magadha by 125 A. D. His Kingdom extended certainly over Gorakhpur; as we know from Itsing that he built the "China" Temple for some Chinese pilgrims who visited his kingdom, and the site has been identified by Cunningham with the ruins of an old Temple near Bulliah, in Gorakhpur; how much further his or his sons Kingdom extended, does not fall within the province of the Bengal Survey.

It is only just possible that Anga may have been ruled by the Naka King mentioned in the Vishnu Puran, as the Vayu Puran says "the nine Naka Kings will possess the city of Champavati (Bhagalpur) and the seven Nagas the pleasant city Mathura" but against this is the *fact* of the discovery of the Coins of 9 Nagas in Padmavati, and the editor's (Fitzedward Hall's) note p. 218 Vol. IV, Vishnu Puran: and I think it may safely he rejected as an error. In passing I may note that the recently discovered initial point of the Gupta era, will necessarily alter the dates of the Naga Coins also, bringing them forward, and that the ascription of the first Naga King to 57 A. D., the initial point of the Saka era, and the assumption of his elevation to power by the Sakas as a tributary prince, does not appear likely to dislocate any well established dates.

The accession of Maharajah Adhiraja Chandra Gupta to Sovereign power being now dated to 166 A. D., the initial point of the Gupta era, (Cunningham Indian eras) the accession of Maharajah Sri Gupta cannot be placed very far from 125 A. D. But the succession of the various later Guptas is so involved, that before taking up the Gupta dynasty, it will be well to give a list of the Guptas compiled so far as, I can from all available sources, with such tentative dates as to me appear to suit known facts, giving my reasons for so arranging and dating them. Along with the Gupta series necessarily comes in also a list of the Varmmas of Magadha their contemporaries.

First then as to arrangement. The succession of the first 7 Gupta Sovereigns, from Maharajah Sri Gupta to Skanda Gupta, is absolutely certain from their inscriptions, and needs no furthur discussion.

I have inserted a Deva Gupta between Skanda, and Budha Gupta, on the authority of General Cunningham, supported as appears to me by Mr. Smith's paper in the Journal As. Soc. Bengal for 1884. According to Mr. Smith a coin, the legend

on the reverse being Sri Prakasaditya, (which is Cunningham's reading for the older variant readings, and which reading is accepted by Mr. Smith) "resembles the mintages of Chandra Gupta II and Kumara Gupta"; he however goes on to say that in weight it approaches the coins of Nara Gupta; evidently therefore, on numismatic evidence, Prakasaditya must come in, either just before, or just after Budha Gupta. But Cunningham reads a coin, which he considers, (probably on numismatic evidence) ought to follow Skanda as Deva Gupta; and he has so placed him in his latest arrangement of the Gupta Kings Vol. X p. 126.

It is unlikely that 2 different Gupta king's names, just about the period of Budha Gupta's time, are missing. It is known that the Guptas assumed various titles; as Vikramaditya, Mahendraditya, Kramaditya, &c. And as Mr. Smith has apparently read only the title on the reverse, the obverse being defaced, Cunningham and Mr. Smith appear to me to have read, on different coins, the one the name, the other the title of the self same king. Accordingly I have joined the name and title together, and inserted a Deva Gupta Prakasaditya after Skanda Gupta. I may remark, that the gap between the death of Skanda in 319 A. D., and the last known date of Budha Gupta in 108 odd of the Gupta era corresponding to say Circa 350 A. D. appears long, and needs curtailing by inserting this doubtful Deva Gupta; with title of Prakasaditya.

Of Budha Gupta's successor Tathagata Gupta, we know little beyond the fact of his succeeding Budha Gupta, and building a Sangharama in Nalanda, from Hiouen Thsang. As the Chinese traveller is always very careful and accurate in his accounts; I unhesitatingly accept his authority, for inserting Tathagata Gupta, after Budha Gupta; on his authority also I insert Vajra Gupta, as the successor of Nara Gupta Baladitya, of whom however we know nothing, beyond the fact stated by Hiouen Thsang, that he built a Sangharama in Nalanda.

Of Nara Gupta Baladitya, there are several coins, on which Nara Gupta has been read by Cunningham; which he fills up to Narayana Gupta; he is evidently the same King, whose name is read as Nara Gupta by Thomas and Smith. The title of Baladitya is found on the coin which Cunningham reads as Nara, and fills up to Narayana, as well as on Thomas' and Smith's which they read as Nara only. Vishnu Gupta Chandraditya is placed following Nara Gupta. It will be seen that the later Guptas, have an uninterrupted succession, for many generations, and his coins will not admit his being identified with Vishnu Gupta II in the 7th to 8th centuries; besides which, his title of Chandraditya, would entitle him to a place along with, and immediately following, the earlier Guptas, who all bear titles ending in Aditya.

Of the following Guptas, the Afsar inscription carries the succession down to Aditya Sena Deva; the only point needing remark is my insertion of Narendra Gupta Sasangka Deva, between Madhava Gupta and Aditya Sena Deva.

In the Afsar inscription, the succession is perfectly clear, down to Madhava Gupta; then comes a hiatus, in which a name like Hashka, can be read in Rajendra's transcript: As the stone is much worn here, and the impression is consequently very defective here, the name is as likely to be Narendra as Hashka, especially as no such name as Hashka, is known from any records, while it is clear from the record of the cutting down of the Bodhi tree, in Mahabodhi, that Narendra Gupta Sasangka must be placed before Aditya Sena. It is however just barely possible that Sasangka Deva Narendra Gupta is not at all of the Northern Gupta family; for Hiouen Thsang calls him King of Karna Suvarna, and Karna Suvarna is not Anga: but Beal, in a note, says he was King of Gauda; on what authority I cannot ascertain: (Hiouen Thsang Vol. I. p. 210 Beals transl.) and it is scarcely probable, that the King of Karna Suvarna, supposing Karna Suvarna to be somewhere near Bara Bazar as Cunningham supposes; (Geogr: Ane: India) or as I now particularly locate it, on the banks of the Suvarna Riksha; (Arch reports Vol. VIII.) would be powerful enough to conquer Magadha from a King, who must certainly have been related to the great Harsha Varddhana family of Kanoj; and to do which, he must have passed through the territories of the King of Anga. At the same time it is but fair to state, if only to express myself unconvinced, all the possible arguments against his being King of Anga, which included as a dependency, Gauda, and Karna Suvarna; and the most plausible argument is to be found in the Katha Sarit Sagara. There it is said that King Mahasena sent messengers to the King of Hansadwipa, asking his daughter in marriage for his son; and these messengers embarked at the city Sasangkapura of King Mahendraditya. The name Mahasena is strangely familiar to us, as Mahasena Gupta, and Mahendraditya reminds us of the titles ending in Aditya, borne by the Gupta Kings. But as Mahasena must have been King before Sasangkas short reign, and Sasangkapura must have been founded by Sasangka, who must have been then dead; (as the reigning King is called Mahendraditya there is a serious want of the congruities of time in the story, which must preclude its acceptance, as in some sort throwing valuable light on the subject under discussion.

The only other record which could have supplied the name exactly, is the Barnarak one; but here unfortunately the same

hiatus occurs; the name itself is missing, only the following word Gupta, remains. Cunningham himself admits p. 75 Vol. XVI "As the son of this Gupta is mentioned as Aditya Sena, I have not hesitated to suggest Madhava before Gupta, as this is the name of Aditya's father in the Afsar inscription."

But as will be seen on reference to Vol. XVII Journal as Society, this is very doubtful; a name appears to me to intervene between Madhava and Aditya Sena Deva; and apparently Dr. Rajendra Lala thought so too: I cannot therefore accept Madhava Gupta, as Adityas father, when, in addition to the difficulty just noted, there is the necessity of finding room for Narendra Gupta Sasangka before Aditya Sena.

My own doubt is not in placing Sasangka before Aditya, but in his other name of Narendra Gupta. The Seal in Rohtasgarh, clearly gives his name as Caçangka Deva; and I am aware of no lithic authority for calling Caçangka, Narendra Gupta: As however several authorities, all concur, for reasons unknown to me, in making Narendra Gupta an alias of Sasangka: and there is, so far as I am aware, no grounds for rejecting their ipse dixit on this point; I accept it; with the proviso, that it is Caçangka Deva, whatever title future research may shew him to have possessed, whom I regard as Aditya Sena Devas predecessor.

Of course further research may shew that Caçangka did not belong to this family of Guptas at all, but to some hitherto unknown contemporary line;—if so, of course the list will have to be corrected, but this is scarcely likely.

The succession from Aditya Sena is absolutely certain from the Barnarak inscription.

On the succession of the Varmmas, a few words are necessary.

The succession of the first three is fixed by the records of the Barabar Caves.

The Asirgarh Seal, (Journal R. As. Soc. III., 378, Journal As. Soc. Bengal V. 482) gives the succession of the next five Varmmas. Whether any others have to be inserted between Ananta Varmma, and Harivanuma, is doubtful; no names, which appear to belong to such a place, have yet been found.

The last of these, Sarvva Varmma, is followed by Avanti Varmma in the Barnarak inscription, and he by Graha Varmma (who Marries Rajya Sri sister of Harsha Vardhana of Kanoj.)

The necessity of following him by Sri Varmma, is found in the succession of their contemporaries the Guptas; Mahasena having fought Sri Varmma.

From Hiouen Thsang we learn, that at a conference, Harsha Varddhanas elder brother Rajya Varddhana was teacheroursly killed by Sasangka.

Bana mentions a Kshetra Varmma as killed by treachery.

The Varmmas were Kings of Magadha, and none of them except Kshetra is known to have been killed by treachery.

That Sasangka held Magadha as suzerain King is certain. The probability is, that he invited the Magadha king, with whom he was at war, and over whom he must then have obtained important successes, and his relative Rajya Varddhana the king of Kanoj ; to arrange about a peace, and treacherously murdered them. Purnna Varmma necessarily follows Kshetra Varmma as he was the King of Magadha, who restored the Bodhi Tree, shortly after Sasangkas return of his own Kingdom. Bhoga Varmma, King of Magadha must follow Puruna Varmma ; as his probable date is fixed by the recorded circumstance in the Nepal Inscrns, (Archæol rep. XVI) of his marriage with Aditya Sena's daughter.

The positions of Deva Varmma and Mala Varmma are fixed by their dates from Chinese records.

Yaso Varmmas date from the Raj Tarangni, makes him follow Mala Varmma, so Jayanta Varmma follows Yaso Varmma. As the Gupta dynasty of East Magadha appears to have ceased with Savitri Gupta, and I know of no other successor of Yaso Varmma, I conclude that the Varmma who was King of Gauda was also Yaso Varmma's successor in Magadha and Anga.

Hari Varmma is a name, which occurs in an inscripn. in the as Soc. mus: J. A. S. Bengal Vol. VI. as a King of Gaur. I do not see any place for him in the Magadha list if his date, which is simply Samv. 32 he reckoned with the Sri Harsha era giving 666+32=638 A. D. He must then have been only a King of Gauda. But as we know Purnna Varmma was then reigning in Magadha, and Aditya Sena in Anga he cannot even be that, but he may belong to the Bhaskara Varmma family of Kamarupa. But by reckoning his date from the Balabhi era (as it is known the Varmmas did use the Balabhi era) he is placed in his proper position following Ananta Varmma, and I have accordingly so placed him.

So much new matter has been added by recent research, which puzzles even experts ; and as will be seen, even General Cunningham's most recent lists of the Kings of East and West Magadha, needs so much modification, that I should be simply perpetuating the vicious mystery with which Archæological research is shrouded, by the numismatic prolix uncertainty, and palæographic intricacy of some Archæologists; or by the unfruitful critical verbosity on monumental architecture of others ; (of

whom the brilliant author of the 4 closely printed volumes of the History of Architecture, and sundry other octavo quarto and folio works, is the typical and highest exemplar) were I to pass it all over, by a bare allusion, and a bald statement, which few experts would contradict, and fewer outsiders understand or attack. For Bengal which has been entrusted to my charge, I have tried so far as my very limited knowledge will permit, to continue the good work begun by Sir Alexander Cunningham in his last few volumes, which throw a flood of light into the obscure corners of the Archæology of Bengal; and I am sure that in continuing his work, in the spirit in which he as it were bequeathed it to me, I shall be doing, what must be the intention of him, at whose feet my little handful of knowledge, after sixteen years of apprenticeship, has been acquired. As personal vanity will not permit me to think myself quite a blockhead, I have come to conclude, that an undesirable mystery, has, some how or other, been instrumental in prolonging my term of apprenticeship; and to determine that so far as my humble efforts will avail, no future apprentice will have to pass such a long term as fifteen years in apprenticeship, when every other science, or art needs but an apprenticeship of but five to ten years.

With these remarks on the succession of names, I now append the list of Guptas and the parallel list of the Varmmas, and follow it with my reasons for differing from General Cunningham.

TABLE OF THE REIGNS OF GUPTAS AND VARMMAS.

Guptas.			Varmmas.	
Dates General Cunningham.	Dates Mine.	Names.	Names.	Dates.
100	125	Maharaja Sri Gupta.		
133	140	Ghatot Kacha.		
166	166	Chandra Gupta I (married Kumari Devi).		
200	200	Samudra Gupta with the titles of Parakrama, Apratiratha (married Datta Devi).		
230	230	Chandra Gupta II titles Sri Vikrama, Vikramaditya SinhaVikrama (married Dhruva Devi).		
260	260	Kumara Gupta titles Mahendra Sinha, Ajita Mahendra Mahendraditya Deva.		
296	296	Skanda Gupta Kramaditya.		
319	219	Deva Gupta (?) Prakasaditya.		

Gupta's.			Varmas.	
Dates General Cunningham.	Dates Mine.	Names.	Names.	Dates.
326	326	Budha Gupta.		
	356	Tathagata Gupta.	Yajnya Varmma ...	319
	380	Nara Gupta Baladitya.	Sardulla Varmma ...	330
	410	Vajra Gupta.		
	425	Vishnu Gupta Chandraditya.	Ananta Varmma ...	335
			Hari Varmma (married Jaya Swamini ...	350
475	450	Krishna Gupta.	Aditya Varmma (married Harsha Gupta) ...	400
500	470	Harsha Gupta.	Iswara Varmma (married Uma Gupta) ...	430
525	480	Jivita Gupta.	Isana Varmma (married Harshini	460
550	500	Kumara Gupta II Pratapa Deva.		
			Sarvva Varmma ...	500
575	525	Damodara Gupta.	Avanti Varmma ...	525
600	550	Mahasena Gupta.	Griha Varmma (married) Rajya Sri ...	550
625	575	Madhava Gupta Bhava Deva.		
			Sri Varmma	570
	595	Narendra Gupta Sasangka Deva.		
			Kshetra Varmma ...	590
650	610	Aditya Sena Deva (married Kona Devi).	Purnna Varmma ...	610
675	675	Deva Gupta Karna Deva (married Kumara Devi).	Bhoga Varmma (married Aditya Sena Deva's daughter)	650
			Deva Varmma ...	670
700	695	Vishnu Gupta II (married Ijja Devi).	Mala Varmma Chinese records make him reigning in 692 ...	690
725	725	Savitri Gupta reigning in 758 Archll. Repts. Vol. XVI. page 68.	Yaso Varmma ...	720
			Jayanti Varmma ...	780

The reasons for placing Maharaja Sri Gupta further forward in time than 100 A. D. have already been given, but it may be added, that Itsing, the Chinese pilgrim, records, that 500 years before his time, Maharaja Sri Gupta, built a temple for Chinese pilgrims. (Beals Hiouen Thsang Vol. I Introd. p. x). Itsing's date is about 670 A. D. and 125 A. D. is nearer the date deducible from his account, which is in round numbers) than 100 A. D. The throwing forward of Ghatot Kacha's reign is a natural consequence.

From Chandra Gupta to Budha Guptas accession I adopt Cunningham's dates, and refer to his Indian Eras and his Arch rep. Vol. X for a statement of the reasons for the adoption of these dates.

But although on Skandha Gupta's death, the inauguration of the Balabhi era, shews, that that part of his kingdom became in some sort independent; there is evidence to shew, that Skandha Gupta's successors, continued to be Paramount Sovereigns; for Maharaja Drona Sinha acknowledges his installation by Budha Gupta, even though, he and his two predecessors, had issued coins in their own name. In Magadha too, although there is no doubt that the Varmmas exercised kingly power, the Guptas continued to be Paramount Sovereigns, as Baladitya Nara Gupta built and endowed the great Temple of Nalanda and defeated and imprisoned Mahira Kula when he invaded Magadha: Caçangka Deva Narendra Gupta and Aditya Sena Deva also undoubtedly possessed Magadha in addition to Anga and Karna-Suvarna, and probably Bengal and Tirhut; while the presence of the names of Deva Gupta, Vishnu Gupta, and Savitri Gupta, in the Barnarak inscriptions, indicate their Paramount Sovereignty in Shahabad, and by inference in Magadha and Anga.

I conclude therefore, that the Varmmas of west Magadha held their Kingdom in some vague sort of subordination to the Paramount Sovereigns the Guptas, right down to their extinction, so far as we now know, with Savitri Gupta; inturrupted only, for a few short years, during Harsha Varddhana's reign, who by Hiouen Thsang account, was Paramount Sovereign over Purnna Varmma of Magadha.

It is worthy of note however that Aditya Sena Deva the King of Anga is not mentioned by Hiouen Thsang as a vassal of Harsha Varddhana. Though too weak to enforce his suzerain rights over Magadha, it does not appear that he ever became, himself, a vassal of Harsha Varddhana; while we know, that after Harsha Varddhanas death, he certainly succeeded in recovering his hereditary power over Magadha.

Budha Gupta was immediately succeeded by Toramana, in Eran, as shewn by the inscriptions there. Cunningham places Toramana's accession in 356 A. D., which I accordingly adopt for Budha Gupta's death, and his successor Tathagata Gupta's accession; this would give for Nara Gupta Baladitya's accession 380 A. D., which agrees very well with the probable date of Mihira Kula, who must have begun his persecution of Buddhists, after Fa Hian had passed through the Kingdom of Udyana. (Beals note 119 Vol. I. Hiouen Thsang says it must have taken place after 400 A. D.) And as after the persecution, he invaded Magadha, and was taken prisoner, and subsequently released; Baladitya must have continued to reign till about 410 A. D. I accordingly place Vajra Gupta his successor's accession at 410 A. D.

Krishna Gupta's date is fixed approximately by his being a contemporary of Aditya Varmma, who married Harsha Gupta, probably a daughter of Krishna Gupta, as Harsha Gupta was his son: Aditya Varmma was the son of Hari Varmma, of whom there is an inscription dated Samvat 32. (Journal as Sec. Bengal IV. 167) where Bhava Deva II the minister of Hari Varmma digs a Tank, builds a superb Temple, and sets up an image of Vishnu, in a village on a wild and lonely road in Rarha Desa, in Samv. 32:—referring the date to the Balabhi era, Hari Varmma must have been reigning in 350 A. D. As however three previous reigns of Yajnya, Sardulla, and Ananta have to be accounted for from 319 A. D. (Skandha Gupta's death) to Hari Varmma; I have placed Hari Varmma's accesssion at the latest possible date of 350; and his sons' accession cannot with much probability be brought down lower than 400 A. D. nor his death much beyond 430 A. D. Krishna Gupta's accession consequently cannot well be brought lower than 430 A. D. I therefore adopt for him a date earlier by 45 years than Cunningham. Vishnu Gupta's accession is consequently dated at 425.

Isana Varmma's date is fixed by his coin on which Cunningham read a date 155, (Vol. IX Arch rep.) which he subsequently supposed to be 257; but 257 would be an impossible date, while 155 with the Balabhi era would fix his date about 473 A. D. His accession might therefore be placed anywhere between 450 and 470 A. D.

But Griha Varmma married Harsha Varddhana's sister, Rajya Sri. As Harsha's father, Prakasa Varddhana died in 598 A. D.; supposing him to have been 75 years old at his death, and Rajya Sri to have been born, when he was 22 her birth could not be dated back beyond 545, nor her marriage beyond 560 A. D.; nor could Griha Varmma, her husband's accession, be put back beyond 550 with any great degree of probability.

Between Griha Varmma's accession in 550 A. D. and Aditya Varmmas in 400 A. D. is a period of 150 years, with 5 reigns: which gives 30 years to a reign; this is certainly as much as can possibly be allowed; these are however the lowest probable limiting numbers, based on absolute, or all but absolutely fixed data; and though high, I have no option, but to accept, and to employ the 30 years, as the average length of reign of the 5 reigns, (which are also generations) of Aditya, Iswara, Isana Sarvva and Avanti Varmma; bringing Isana's accession to 460 A. D., which agrees very well with the date on his coin.

But Isana was a contemporary of Kumara Gupta II. (Afsar Insc.) consequently Kumara Gupta's accession would have to be placed before 490 A. D. on the average calculation. As however this would give the exceedingly small average duration of 16

years per reign for the 5 previous reigns from Vajra Gupta in 410 A. D. I give Isana Varmma a long reign from 460 to 500 A. D. and date Kumara's accession in 500, thus making them contemporaries for just about a year; (Isana may have been killed in the battle with Kumara for aught we know to the contrary) this would give a result agreeing with the previously assigned date of 430 for Krishna Gupta.

Narendra Gupta Sasangka died shortly after destroying the Bodhi tree. This he must have done after murdering Rajya Varddhana, Harsha Varddhana's brother and his relative Kshetra Varmma of Magadha in 607. Rajya Varddhana reigned 9 years therefore he ascended the throne in 598 A. D. (Cunningham Vol. I Arch. rep. also Hiouen Thsang's narrative of events. Beals Hiouen Thsang Vol. I). And Sasangka had been reigning some time previously.

Giving an average of 25 years per reign from Kumara Gupta II, Narendra Gupta Sasangka Deva's accession, falls about 600 A. D. but as he was actually reigning certainly in 598, I propose to place his accession in round numbers in 595 A. D. and his death in 610.

Between Griha Varmma's accession in 550, and Kshetra Varmma's murder in 607 A. D. is 57 years for 3 reigns; 19 years per reign. For the sake of simplicity therefore, I place Sri Varmma's accession in 570 and Kshetra Varmmas in 590 A. D. This will make Mahasena Gupta for the last 5 years of his reign the contemporary of Sri Varmma as required by the Afsar inscription.

Harsha Varddhana's accession being placed at 607 A. D., his expedition to Magadha, to avenge the murder of his brother, cannot well have been undertaken till 610 A. D.; by which time, Sasangka was dead. Purnna Varmma's installation by Harsha Varddhana, I would accordingly place in 610 A. D.; which agrees very well with the date derived from Hiouen Thsang.

Cunningham places Deva Gupta's accession in 675 A. D. in which I concur; this gives Aditya Sena Deva a long reign of 65 years; he must consequently have been a minor when Harsha Varddhana undertook his expedition eastwards, and sufficiently accounts for the mighty Aditya Sena Deva, of later years, not opposing Harsha Varddhana.

Bhoga Varmma, the son-in-law of Aditya Sena Deva, could not have been installed as King of Magadha during the great Harsha's life. As Harsha died in 648, I take it, that on his death, Aditya Sena Deva at once took possession of the Suzerain power over Magadha, and installed Bhoga Varmma his son-in-law King in 650 A. D. Deva Varmma's date is fixed by Itsing,

he was King in the time of Itsing, *i.e.*, between 690 and 700 A. D. (See Jorn. R. As. Soc. XIII. 571, 572). By placing his accession at 670, and his successors at 690 A. D.; he is made a contemporary of Itsing. His successor, Mala Varmma's accession, cannot be placed much more forward than 690 A. D. as he was actually reigning in 692. (Pauthier Journal As. p. 1837, p. 405).

Yaso Varmma's date is fixed from the Raj Tarangini, as well as his successor Jayanti Varmma's who is spoken of as King of Gauda not of Magadha. As however the first of Palas, Gopala is placed at 815, and as I can find no names to follow Savitri Gupta, among the Guptas, unless the semimythical Mahendraditya of Sasangkapura be placed following Savitri Gupta, I provisionally conclude, that Yaso Varmma on the death of Savitri Gupta obtained the paramount power; and if Jayanti was his successor, bequeathed it to him.

From Jayanti's accession to Gopala's accession in 815 A. D. *as fixed by Cunntngham*, there is no necessity for looking for any other King, as 35 years for Jayanti's reign is not beyond the range of probability.

These Sovereigns were succeeded by the Pala dynasty. The Guptas disappear from Archæological record, and of the Varmmas, only one branch perhaps remained in Nepal. It is possible the Mahoba Varmmas were a branch of the same Varmma family, but on this point all is conjecture.

As I accept Cunningham's list and dates of the Palas, with the exception of Gopala's initial date, I simply refer to his reports, especially Vol. XI. And append his list.

Gopala Deva	...	...	815	A. D.
Dharmma Pala	...	...	830	„
Deva Pala Deva	...	...	850	„
Rajya Pala	...	...	885	„
Sura Pala	...	...	887	„
Vigraha Pala	...	...	900	„
Narayana Pala	...	...	915	„
Raja Pala	...	...	940	„
* * * Pala	...	...	965	„
Vigraha Pala II	...	...	990	„
Mahipala	...	...	1015	„
Naya Pala	...	...	1040	„
Vigraha Pala III	...	...	1055	„
Mahendra Pala Deva	...	...	1085	„
Rama Pala Deva	...	...	1110	„
Madana Pala Deva	...	...	1135	„
Govinda Pala Deva	...	...	1161	„
Indradyumna	...	...	1185	„

Indradyumma being driven out by the Muhammadan invasion.

Regarding Gopala's initial date, I cannot disregard the double testimony of Taranath and of Ferishta, who give his reign a length of 45 and 55 years respectively; giving him a reign of 55 years, and not altering the date of his successor Dharmma Pala, his accession is thrown back to A. D. 785. As we know that Savitri Gupta was actually reigning in 758 A. D. and admitting my conjecture, that Yaso Varmma seized the Suzerain power on Savitri Gupta's death, Gopala would be his successor in Anga, and in all probability in Magadha. And Jayanti Varmma would, (after a conjectural rule as Suzerain King over Magadha, Anga and Bengal, for the brief period of 5 years) he relegated to his proper position as the King of Bengal alone (as mentioned in the Raja Tarangini) from 785 A. D. forward.

I have already given grounds for regarding the Guptas, as not only Suzerain Kings holding a sort of Suzerain power over Magadha, and Kirana Suvarna, and Bengal, but as more especially, Kings of Anga. In fact, it is extremely probable, that Maharaja Sri Gupta's successful revolt against the Scythic Governors of Pataliputra, began in Anga, probably in Bhagalpur itself the Capital of Anga, and though Pataliputra was the capital of the earlier Guptas, I think there can be little doubt, that from Krishna Gupta downwards certainly, the capital of the Guptas was not Pataliputra but Bhagalpur or some place in Anga; as not only the more important later Gupta inscriptions, come from Anga, but the tradition of KarnaDevaDevaGupta (the Karna Dahariya of tradition) having rebuilt or built the fort of Karangarh in Bhagalpur; and of the more modern Dharahra being so named after him, (or is it *vice versa*?) establishes the fact, that the Guptas had their head quarters in Anga. At the same time, the circumstance of the earlier Pala inscriptions, and records, (copper plates being found in Bhagalpur in Mongir and elsewhere eastward) confirms the view, that they, during the earlier part of their dynastic ascendancy, ruled their empire, from Bhagalpur, or some place adjacent. The ancient fortress of Kherhi, with its extensive ruins, and its inscriptions in the yet unread shell characters of the 8th and 9th centuries, probably points to its having for sometime, been the seat of Government; and the traditional fortress of Indradyumna in Hasanpur near Lakhiserai, with the great stupa and monastery of Indappe, (a contraction of Indrapura so named possibly from Indradyumna) point to a similar conclusion. At the same time, there is absolutely nothing to shew, that after "the bank of the River Holung gave way and disappeared," "at the close of the years Kan Yuen,"

(A. D. 750) a catastrophe which refers to the swallowing up by the Ganges, of old Pataliputra, (see Journal As Soc. Bengal VI. and Journal Roy As Soc. Lond. 1836 also introduction p. XII. Vol. VIII Archl. reports). Pataliputra ever again became the seat of Government. Yasovarmmapura. (Behar) did enjoy the distinction probably of being the seat of Yaso Varmma's Kingdom, after the Ganges had swallowed up Patna; and I would consequently date its foundation to 750 A. D., or thereabouts; and therefore during Yaso Varmma's reign; who, thus deprived by a catastrophe of his capital, would be forced to build a new one as mentioned by Taranath, by whom the foundation of Yasovarmmapura is ascribed to Yaso Varmma. After his time however the entire weight of probability tends to fix the centre of Government in Anga or at the outside, on the western boundary of Anga, as its most westerly position. Close examination (with exploratory trenches) of the mounds at Bhagalpur at Kherhi, at Dharahra; in Sultanganj; at Kahalgaon, at Rajmahal, in Monghyr; and in Hasanpur, Rajjhana, and the vicinity of Jamui, (Indappe) can alone inform us of the successive changes of the seat of Government, since the great catastrophe to Pataliputra in A. D. 750, compelled its abandonment as the capital of the Varmma Kingdom, after it had some time ago ceased to be the capital of the Suzerain Monarchs the Guptas.

I have now brought the outline of the political history of Anga, so far as recent research enables us to ascertain it, down to the close of the Hindu dynasties with Indradyumna, but before proceeding to the Muhammadan rule, a few words in regard to the caste of the rulers of the Kingdom will not be out of place.

The Sovereigns down to Karna are of the Lunar race. Karna himself is said to be a son of the Sun, but rejecting this myth, he must probably be reckoned a Sudra (the sons taking the caste of the mother) as he was descended from the Sudra wife of Vijaya's father.

The Barhadhrathya dynasty who next ruled appears to me to be of the Lunar race.

The Pradyotas appear to me to have been Brahmans.

The Sisunagas must probably be regarded as of the Solar race, though the mother of the first Sisunaga, was a courtesan. See Turnour page XXXVII. He was however, on the fathers side, of Royal descent, being the son of a Lichchavi Raja (of the Solar dynasty of Ikshvaku) while his mother, though a courtesan, is said to have been of one of the first families in Wesali, appointed to the post of Chief Courtesan, for her great beauty; as though it were intolerable that such great beauty should be monopolised by any one man!

Chandra Gupta was not a Sudra by any means, as Cunningham on slender grounds conjectures; the most detailed account we possess of the rise of Chandra Gupta, is given in the Tika to the Mahawanso, and we there learn, not only that Chandra Gupta was not a Sudra; but that he was very far from being an ordinary man; he was the son of a Brahman of Takshasila, in the Panjab; learned, skilful, dexterous in policy and intrigue, and known "as a highly gifted individual, worthy of swaying the Chhatta" (Turnour Mahawanso p. XXXIX).

The Maurya dynasty was succeeded as we have seen by the Paramount rule of Yavanas, Tocharas, and Sakas successively; then comes the rise of the Guptas.

That Maharaja Sri Gupta was not a sudra as Cunningham says, is abundantly clear from his descendant marrying into the Solar Lichchavi family. I conclude therefore, that the Guptas were certainly Kshetriyas, though not probably of the Solar race: this would account for Chandra Gupta on his coins parading his marriage with a Lichchavi princess. Possibly they were descendants of the original Lunar Kings of Anga. It does not appear to me to be at all true that obscure individuals (except in such a very rare case where Genius and Opportunity combine as in the Corsican Napoleon, or the Indian Chandra Gupta) ever succeed in raising themselves to the Royal dignity, anywhere, least of all in India; where social rank and influence, and consequently political power, is conferred by "blood" and neither by wealth, nor except in the rarest of cases, by talent. And however heterodox it may sound in these days, when every man, almost as an article of his creed, believes himself the equal of every other man, notwithstanding differences of birth and blood; I maintain the substantial correctness of my statement, and I appeal to Indian History for the fullest confirmation of my sweeping assertion as regards India. Of course it will be understood, I exclude Muhammadans from my statement; and further; in descending to modern times; the tremendous disintegrating power of the foreign domination of an alien (and as regards rise to highest power) an intensely democratic race must be allowed for: the substantial equality of all true believers is the political foundation of Muhammadanism, and the reason of its gigantic and rapid rise and progress. The Oneness of a Great Power, apart from, and utterly unreachable by the Jamaat of believing equals, is only a necessary Corollary to the *fundamental vital proposition that all are equal*: but this by the way.

It now only remains to ascertain if possible, the caste of the Palas.

The Tomar dynasty of Palas beginning from Anang Pal which ruled Delhi and Kanoj rose to power about 736 A. D. (See Archl. rep. Vol. I p. 145). That Delhi was their Capital for several reigns, there appears to me to be no doubt; but at some uncertain period, the Capital was removed to Kanoj: when this was done, is uncertain; but as Bhoja Deva was reigning in Kanoj, as well as his successors, probably without interruption, till the defeat and death of Jaya Pala in 1021 A. D.; I infer, that this move eastward, took place, shortly after the accession of the Tomar dynasty to Supreme Power in N.-W. India. As Bhoja Deva was reigning in 862. I would assign this move eastward to say 800 circa or thereabouts.

Now it is remarkable, that a dynasty bearing the same distinctive appellation of Pala, as the great Tomar Dynasty, rose to power in East India, within a few years of the rise of the Tomar dynasty, in Western India; and that this rise of the Pala dynasty in East India, corresponds even more closely with the move eastwards, of the Tomar dynasty of the Palas of North-West India. I infer therefore, as, much more probable, than Cunningham's supposition, of the sudden and unexplained rise of an unknown sudra to Supreme Power; that a scion of this powerful family, aided in all probability by the forces and wealth of the reigning head in Delhi or Kanoj, came down eastwards, conquering the eastern Kingdom from the Varmmas; and established himself as Supreme Sovereign. His name being Gopala or Bhupala. And founded the Pala dynasty of East India.

If my suppositien be correct; and every consideration of probability is in its favor, the Palas of East India would not be Sudras or Bhumihars but Tomar Rajputs.

Unfortunately, there is no such detailed record of marriages in the various inscriptions of the Pala dynasty, as would enable us to establish the caste of the Palas by means of the caste of the princesses they married, with the exception of the one regarding the marriage of Vigraha Pala, to the Haihaya Princess Lajja Devi: as the Haihayas were Kshetriyas, it is evident that Vigraha could not have been a Bhuinhar Babhan, but must have been a Rajput. A Bhuinhar Babhan, even though a Raja, (as Tikari whom Cunningham cites as an instance) *neither claims for himself, nor is ever permitted, or admitted by the people for a moment, to pass himself for a Brahman.* If then the Palas were Khsetriyas, as appears certain from their marriage with the Haihaya Princess, the probability of their being a branch of the powerful Pala dynasty of Tomaras of North-West India, is confirmed.

Of the caste of the Varmmas, who have been mentioned along with the Anga Kings of the Gupta dynasty, a few words here will save reference and repitition in future. Cunningham has established that they are Mauryas, and consequently in all probability descendants of the great Maurya dynasty, This would account for their rise to power on the decay of the Guptas, though it is not too much to suppose, that they were powerful, though not independent princes (owning only the Suzerainty of the Guptas) even during the reign of Maharaja Sri Gupta; and that they had helped him in his revolt, and in driving out the Saka Governors.

As Chandra Gupta was a Brahman, it appears that the Varmmas must be considered Brahmans also. It is true they are recorded to have married two Kshetriya princesses; one the sister of Harsha Varddhana a Rajput, another the daughter of the great Aditya Sena Deva, probably of the Lunar race, and certainly a Kshetriya; but as a Brahman may marry a Kshetriya wife without loss of caste, and such marriage redounds, rather to the glory of the Kshetriya family so honored; I can readily understand, that the powerful and Suzerain Kings Aditya Sena and Harsha Varddhana, rather plumed themselves on having secured Brahman husbands for their daughters, even though these husbands were, in a manner their subjects.

There is a version of the rise of Chandra Gupta which makes him out a descendant of the Ikshvaku line; and therefore a Kshetriya (see Turnour p. xxxix.) but I have preferred the version which brings him from the Panjab, as it is countenanced by the classical writers DiodorusSiculus, Justin, and Plutarch; all of whom say Chandra Gupta actually met Alexander in his youth; the version which makes him a native of the Panjab would admit of this, while the version which makes him a Sakya prince will not; but further, the *aid* he got *from Parvatendra* the Mountain King, and his army of *Mlechhas and Barbarians*—(another authority says *Yavanas*) confirms the version which brings him from the Panjab.

It is worthy of note that the last of the Nandas who lost the empire, was the son of a Sudra woman. And therefore himself a Sudra: compare this with the conquest of Anga by the Magadha Kings, about the time, when Vijaya, also the son of a Sudra mother, reigned over the Anga Kingdom.

We have now arrived at the close of the Hindu rule in Anga; and it remains to trace, so far as possible, the fortunes of Champa, (Bhagalpur) and incidentally of Anga, of which it was the Capital, during the Muhammandan period.

The mention of Bhagalpur during the Muhammadan period is unfrequent and meagre; no doubt because, at the time of the Muhammadan invasion, it had ceased to be the Capital of the province.

The earliest mention that I can find of Bhagalpur is in Humayuns time (Elliott VI.) "When he (Humayun) arrived at Bhagalpur, he divided his army and sent Mirza Hindal with 5,000 men over the river to march on that side."

After Humayun, in Akbar's reign, Bhagalpur is mentioned several times.

When Khan i Khanan invaded Bengal during the reign of Daud Khan; (King of Bengal before he took Garhi;) "he had previously made himself master of Surajghar on the Ganges, about 80 miles from Patna; of Mongir with the help of Raja Sangram of Gorakhpur, and Puran Mal Raja of Kidhur; and of Bhagalpur" (Elliott V. 381 note).

In the Military revolt in Bengal during Muzaffar Khan's Governorship, brought on by Akbar's attempt to enfore his new fiscal system; the rebels, among other places, took Bhagalpur; and when Todar Mal, who on receipt of the news of the revolt, had been appointed Governor, (in place of Muzaffar killed by the mutineers) reached Mongir with the imperial forces, he found the rebel army of 30,000 cavalry encamped at Bhagalpur, ready to give him battle. As Todar Mal declined to risk everything on a pitched battle, he entrenched himself in Mongir and in time after several skirmishes in the vicinity of Bhagalpur, succeeded in wearing out the patience of the rebels; who straitened for provisions by Todar Mal's policy of conciliation of the local Hindu Zamindars, and of ready money payments for provisions; (which diverted the entire food supply from the rebels to his own troops) made a dash in two parties for Patna and Behar in hopes of surprising these places. (Stewart) A. D. 1580.

Khan Jehan, after the death of Munaim Khan, was ordered to Bengal as Chief, Todar Mal being superseded and placed under him as 2nd in command; he was met by the Bengal Amirs and Chagatai nobles at Bhagalpur. (Blockmann Ain i Akbari.)

When Man Singh was appointed Governor of Bengal and Behar, he assembled his forces at Bhagalpur, preparatory to marching down through the Santal country to Bardwan, on his way to West Orissa from the Afghan rebels.

In the fiscal system of Akbar, we find from the Ain i Akbari, that Bhagalpur was only a Mahal (district) in the Sarkar of Mongir in the Subah of Behar, paying a revenue of 4,696,110

dams (about 117,500 rupees.) It was the seat of a Faujdar; an office held during the reign of Shah Jehan, by one, Atish Khan Dakhini; it is also noticed in the Maasir i Alamgiri, as the residence of Shekh Kaziuddin one of the compilers of the Fatuha i Alamgiri. It continued to be the seat of a Faujdar right down to recent times. It was here, that Suraja Daula in 1757 directed Law to await his orders, to march down to Murshidabad, when hostilities with the English were imminent; but the order for the march, arrived too late; and Law had not passed Teriagarhi, when news of the battle of Plassey reached him, and he returned to Bhagalpur. Had he marched on to Udhwa, 20 miles further; he would have met, and saved his employer, who was seized in the vicinity of Rajmahal.

From here on the news of the advance of the English, Law started for Patna, just 4 days before Major Coote's arrival on the 15th July 1887. It is worthy of note that when Major Coote left Bhagalpur on the 19th, in pursuit of Law; the "Governor" as Orme calls him, (Faujdar probably) sent after him as auxiliary, a body of 60 horsemen, under command of his son; it is clear consequently, that Bhagalpur not only submitted to the English with a good grace, but that the submission was a willing one: possibly the license of Law's irregulars had a good deal to say to the welcome the English received (Orme Vol. II).

Bhagalpur is also mentioned in Taverniers travels; who notices 3 rivers between Jangira and Bhagalpur, which he specifies as the Ronova, the Tae, and the Chanan: The Chanan is the Chandan, which joins the Ganges close to Champanagar; the Ronova is the Banrooah, which now joins the Chandan, and has no independent outflow except occasionally; I cannot identify the Tae river.

On the East, after passing Bhagalpur the traveller mentions the Katare river, which must be the Kataree of modern maps; but it has now no independent outfall, it joins the Ghogha river and both combined flow into the Ganges close to the Ghogha station.

I append the entire passage as the book is now difficult to procure. Tavernier Vol. II Ch. VIII.

Le premier jour de Janvier 1666, apres avoir vague deux heures je vis le *Gaudet* entrer dans le Gange and qui vient du Nord. C' eft une grande riviere qui porte bateau.

Ce soir-la le gite futá Zangira, Cosses 8.

Mais comme le Gange ferpente fort toute cette journee, on fait bien par eau Cosses 22.

Le 2 depuis les six heures du matin jusques vers les onze je vis trois rivieres entrer dans le Gange, and elles viennent toutes trois du cosse du Nord. La premiere s'appelle *Renova,* la seconde Tae and la troisieme Chanan.

Le 3 apres quatre heures de chemin sur le Gänge, je tronvay la riviere de Katare qui vient du Nord, and vins coucher ce jour-la a un village appelle *Pengangel* au bout des montagnes qui viennent jusques au Gange, Cosses.

More recent travellers have occasionally visited Bhagalpur—and from among the occasional notices scattered here and there, I cull the following:—

Francklin in his "researches on the tenets and doctrines of the Jeynes and Boodhists" p. 99. Alludes to some Jain Temples in Champanagar. Describing the Temples on the Parasnath Hill he says. "These temples in shape, very much resemble an extinguisher; in them is to be seen the Vasu Padukas, or the sacred feet, as is seen in the Jeyne temple at Chumpanugger."

I quite agree with Francklin in his simile, and the temple alluded to is quite modern, and devoid of interest as a specimen of ancient Architecture; and only succeeds in displaying the utter degradation of the Art of Architecture in modern times in India.

Lieutenant Thomas Bacon in his first impressions in Hindostan, Vol. I gives a pictureque view of the "ruins at Bhaugulpore" I recognise them as meant for the now ruinous buildings at the entrances to the famous Bhagalpur caves at Mayaganj near Barari, but the buildings have since his time, considerably decayed, and the greater portion fallen; and a view now would not be nearly so picturesque; he also alludes to two round towers, which, if they do not mean the ugly spires of the Jaina Temple, I have been unsuccessful in finding; he says.

"Before quitting this village Patarghur" (Patarghar he has told us in p. 281, is "a small place" "about a mile to the N.-W. of the capital." I cannot find the village however). "I must not omit to mention two very extraordinary round towers which are by tradition said to have been built by a company of the Jhaina caste, who travelled from Mysore in the latter part of the thirteenth century. This account has some support beyond mere tradition in the circumstance that the towers, which are held very sacred by the Jhains, are similar in structure to those found in many parts of Mysore, more particularly as Sravana Belgala."

If Lieutenant Bacon's memory has not misled him as to the location of Patarghar, these Temples would be the most important remains above ground in Bhagalpur, and would be so interesting

and important, that though my inquiries and search has failed in the past, it is worth trying for again.

Major Archer, aide-de-camp to Lord Combermere though he describes some of the ruins of Rajmahal says nothing of interest about the antiquities in Bhagalpur.

Bishop Heber visited Bhagalpur and mentions the Cleveland monument, but no other.

Hodges the artist also visited Bhagalpur but I can find nothing of interest in his quarto volume, about Bhagalpur; though he gives an interesting account of a beautiful waterfall some miles off: but I have been unable to lay my hand on his folio volume of plates which may contain something.

Emma Roberts in her charming volumes, has nothing about Bhagalpur, though she gives a picture of some antiquities nearabouts, which will be noticed in their proper place.

None of the other travellers that I am aware of, have anything of interest about Bhagalpur.

Nevertheless there are many objects of interest above ground in Bhagalpur even now. These are noted as Nos. 1 to 9 which I proceed to notice; premising, that the greater portion by far, of what is of interest in Bhagalpur, has yet to be brought to light by exploratory trenches.

No. 1 is a Masjid known as Shah Chamas, near the fuel and small-log market, in Bhagalpur; it stands on a raised platform about 5 feet high, and has a "Madrasa" and a well attached. The open raised terrace in front of the Masjid is paved with grey sandstone slabs. The Masjid proper at the West end of this terrace is an ordinary looking one of probably the 17th century; the entrances are small, and the interior, divided off into convenient square compartments, are covered over with domes. An inscription in black stone, No. 102, Bengal list, is let into the panel in front of the Masjid over the central arch, and is said to have been taken from the Imambara of Rasul Khan, now demolished. As however it merely contains sentences from the Koran it is of no interest. The building is in good order, often whitewashed, and has apparently its finances in a flourishing condition; beyond the circumstance of the building being rather superior to the usual run of such buildings of recent times, there is nothing of interest about it, and as access is denied, it is neither possible nor necessary, to furnish any plans or drawings, of what is only one of a very ordinary specimen of the later Muhammadan Architecture.

No. 2. Is a pretty building, with its numerous domes and spires, standing on a revetted terrace, overlooking the river, in

the grounds, and indeed in the compound of my friend Babu Surjya Narayan. The building is said to be the Mausoleum of a local Magnate, Mirza Ibrahim Husain Khan, whose great grand son Mirza Muhammad Husain Khan, is now alive, and a resident of Bhagalpur in reduced circumstances: he is said to have been a Faujdar of Bhagalpur, and I should say the last one, before British annexation; it must have been he who assisted Coote with 60 horsemen under command of his son in his pursuit of Law; but as Orme does not mention the name of the "Governor" this is a conjecture.

The building is a pleasing one, and has some peculiarities of construction, which deserve illustration; as it is easily accessible and in good order, the necessary details will be secured and appear in part II of the Bengal reports.

Within the grounds of Babu Surjya Narayan Singh, and close to this Mausoleum, have recently been dug out, several black basalt monoliths, which, from their size, and shape, and sculpture, must be Muhammadan, and used to support the cloth canopy over some sacred tomb now disappeared; I may note that the building in whose compound these monoliths have been dug up, used to be occupied by the rulers of Bengal, in days, when Darjiling had not become the summer head-quarters of the local Government. There are also 2 old cannon, (and 2 others were carried off recently) with an inscription which alludes to a Hindu Victory; and a fragment of another on the river revetment, (which must once have been battlemented and defensible) the cannon are said to have seen service in the battle at Ghoga Nala, in the days of Alivardi Khan Mohabat Jang, when he was attacked by Mustafa Khan.

History says nothing however of a battle between Alivardi Khan Mohabat Jang and his dismissed and rebellious general Mohabat Jang. Stewart merely says that an invasion of the Maharattas (the 5th I count it) took place about 1748 A. D. and they were joined by the rebels, when a skirmish took place near Bhagalpur, between them and Alivardi Khan, who on the news had hastened up to Mongir: I have no doubt this is the battle referred to in the tradition—but the inscription mentions Gurhatta and goes on to record the victory of one, a Hindu Maharaja, against the Muhammadans who are there called Yavanas.

Besides these monolithic basalt pillars, which I will presently give reasons for beliving to be converted Hindu material, there have been dug up occasionally, near some huts just at the edge of the compound, blue and yellow glazed-tile fragments and Babu Surjya Narayan on excavation discovered a stone

platform which he conjectured rightly to be the remains of a Masjid, as the foundations of one of the flanking towers of the central archway still exists, being an octagon of 20 inches side, and on examination of the spot, I find distinct traces of massive foundations; I conclude therefore that a Masjid, and a Darga, which must date to the time of the independent Muhammadan Kings of Bengal, existed here; the basalt pillars doubtless formed the supports for the complimentary embroidered cloth canopy, similar to that stretched over the tomb of Mir Qutab Alam in Hazrat Pandua, as these pillars resemble the pillars in the shrine of Mir Qutab Alam (see Ravenshaw pl. 28) but as these pillars are rather taller, I would ascribe the building of the Masjid and Darga to about the same period within 50 years, *viz.*, during the reign of Syad Husain, who reigned under the title of Alauddin Husain Shah, from (A. D. 1498 to 1520 A. D. according to Stewart) A. D. 1493 to 1529 according to Cunningham on the authority of his coins, which range from 899 to 926 A. H. which however correspond to 1493 to 1520 A. D. so that Cunningham's 1529 is probably a mistake for 1519. A. H. 926 began on December 23rd, 1519, and must have run through nearly the whole of 1520 A. D. (see Vol. XIV Arch rep. and Indian eras) and I accordingly accept 1493 to 1520 as his correct dates of accession and death.

Alauddin Husain Shah certainly built the great Masjid near the railway station presently to be noticed, and was evidently very religiously inclined, Stewart says, he settled a grant for the support of the "Tomb College and Hospital of the celebrated Saint, Kutb ul Alam, which are continued to this day." And also that "He built public Mosques and Hospitals in every district, and settled pensions on the learned and devout."

I have no hesitation in ascribing the monolithic pillars and the destroyed Darga and Masjid to him.

In the same compound has been dug up, and now lies close to the well, and close also to the exhumed monolithic pillars, one architrave and a lintel of beautifully smooth black stone, precisely similar to the material of the pillars, but sculptured with the elegant scroll work, which appears to have been a characteristic of the sculptured work of the Guptas. It is difficult to judge of the period of a building from a specimen of the sculpture alone, as no pillars have been dug up; but at least this much can be asserted with certainty, that the buildings which were destroyed in Bhagalpur of which the exhumed lintel and jamb are fragments, was of the same period, as the temples which furnished the material for the magnificent central niche of the great Adina Masjid. That more may be found where these have been, appears to me probable, as the mounds on which the house and the tomb

stand and one or two still unoccupied mounds, are in all probability mounds inhuming the ruins of demolished Hindu buildings.

Object No. 3 is as said in the list, a Jain Temple—but it can scarcely be 200 years old, the Jains however make such difficulty in admitting any one, not a Jain, into their temples, (in Bengal even more than orthodox Hindus) that it was with the greatest difficulty, I could obtain admission into the court yard, after pulling off my shoes; and as there was really nothing of interest, except some thin plate-gold chirags beaten into the form of the fabulous 7 hooded shake on long rods, and a barbaric display of gold and jewels, I much regretted, exposing myself to a cold through wet socks, to the vile smells of the court, and to the insolence of the temple servants.

The Jain Temples have however been noticed by more than one traveller, though I can scarcely believe that Lieutenant Bacon's note (see ante) can have reference to the modern ugly white-washed structures which are a type of about the lowest degradation architecture can descend to. Francklin's note (see ante) is the earliest notice of the Jain Temples that I can find; I can only suppose that the known wealth of the Jain community, their barbaric exclusivenèss and intense bigotry, and intolerance, their peculiar tenets and their absurd pretensions, have invested their temples with a sentimental interest, which, as objects of art they do not deserve; when I find travellers in possession of their senses, going into extacies over the miserable sentry boxes on Parasnath hill or the commonplace buildings at Mandar or Pawa, which, if they had been built by the much maligned Hindu, would I suspect have formed the text for a homily on the æsthetic turpitude of the Hindu mind.

Object No. 4. Consists of 2 Masjids, of which the one in Mulla Chak is of some interest not only from it size, but also from the inscription on the old gateway leading into its court; the inscription No. 101 is of "Ala-ul-duniya Wa-ul-din Ab-ul Muzaffar Husain Shah Muhammad bin Shah Mahmud Hasan," but I fear the date has been wrongly read as 959 A. H., as Husain Shah ceased to reign in A. H. 926, and the Muhammadan Kingdom of Bengal, ceased to have even a nominal King, with the capture on the battle field of Rajmahal, in A. H. 984, and the subsequent death of Daud Shah: and I can find no name corresponding to Husain Shah between A. H. 926 and A. H. 984.

The inscription however deserves careful scrutiny. Stewart says of Husain Shah that he was a Syad who "had quitted the deserts of Arabia to improve his fortune in the fertile region of Bengal. His illustrious descent first introduced him into the court of Gaur, where his superior abilities soon raised him to the

high dignity of first subject of the empire. The oppressions and brutal temper of Muzaffar made him a rebel and fortune made him a King." Until however the inscription is properly read, discussion on a conjectural reading is worse than useless.

The Masjid which has recently been repaired, whitewashed, and ornamented by broad strips of black, down its three domes, is a building of some pretensions, standing at the end of a paved court yard: I perceived that the kalás and flowers of the minarets on the cloistered walls of the court yard, and elsewhere where spared by the whitewash, were of baked pottery, covered with a vitreous glaze, as usual with glazed tiles; and I noticed red, yellow, blue, green, and a dark blackish tint, among the colors of the glaze, of which portions still adhere; the greater portion of the cloisters have however long since fallen in, and those still standing have been utilised as residences by the Khadims; some being closed from the Masjid side, and doors broken in on the opposite or what was originally the outer side; as they are inhabited, a complete plan would I fear not be obtainable, but a partial plan, a couple of photographs, with possibly one section, would sufficiently illustrate this relic of the last Muhammadan Sovereigns of Bengal.

The manuscript records of the Masjid say it was built about the time when Farokh Seir was Shahzada.

When Shah Yasin Sehwaniya, of Aliganj in the Gaya District, who was a disciple (spiritual son) of Shah Wajiuddin Guzarati, and the spiritual grandson (Shah Wajiuddin being the disciple) of Shah Muhammad Ghaus of Gwalior, went on a pilgrimage to Mekka; he, after much penance and repentence, cried out before the Holy tomb; oh grandfather! and a voice from the tomb replied Ya walidi. This of course made him a Wali: afterwards in a trance, a vision commanded him to make a disciple of a man named Muhammad Deoriya; accordingly, when on his return, he met Muhammad Deoriya, who meanwhile had moved with wife child from Deoriya to Monghyr, he proposed to make a disciple of him; but Mahammad refused, considering it rather more suitable that he should be the teacher and Shah Yasin the disciple; and was only induced to submit, by a narration of the command in the vision to make a disciple of "one Muhammad Deoriya; he was then ordered to go and settle in Bhagalpur, which was overgrown with Jangal; and he came and settled in Bhagalpur; he was born in A. H. 956: in the 5th reign from Humayun the King; he came to Bhagalpur in 986 A. H. and died 1050 in the 16th year of the reign of Shah Jehan.

He was succeeded by his son Maulana Safi Siyal Koti; he by Maulana Muhammad Asim; he by his son Muhammad Abid; and he by his son Maulana Muhammad Muvabid; his son Muham-

mad Safi; his son Maulana Muhammad Abid urf Shah Nuri; and his, Muhammad Ashraf Alam; successively succeeded to the Gaddi: the last is alive, and receives a pension of Rs. 20 a month from the Government, an amount, to which the original pension has become gradually reduced, from the time of Maulana Muvabid the first pensioner.

Shah Jehan is said to have come here on a pilgrimage in 1035 A. H. Shah Suja also made a pilgrimage to the shrine in 1052 A. H.; Azimusshan visited Maulana Shahbaz in 1112 A. H., and Farokh Seir in A. H. 1122 when the Masjid was built.

It has been a custom of the Gaddi Nashins of this Masjid on no account to travel outside the 27 bigahs of Mulla Chak, except for going to Mecca.

Comment is superfluous!

Object No. 5 is a ruinous Masjid which once was worthy of notice, near Barari. No traditions or inscriptions exist.

Objects Nos. 6, 7, 8. Need no particular description; I will only note, that Cleveland house, built on the great mound, at the foot of which stands the Cleveland monument, is now for sale; and the fact of the monument being there, is adroitly used by the advertisers to enhance the attractions of this desirable property "built before 1780 by the munificence and taste of the illustrious Augustus Cleveland the civiliser of the tribes of the Rajmahal Hills, whose monument at the expense of the East India Company with an inscription on marble from the classic pen of Warren Hastings, first Governor-General, graces the grounds and is an object of pilgrim veneration."

To the Archæologist the chief interest of the mound does not lie in the monument which bears the inscription from the "classic pen" of Warren Hastings, but in the objects buried within: that the site is one of great importance, and of interest, is to me abundantly manifest from the fragments of walls which here and there crop up, above the beautiful grassy slope of the mound; on the East side particularly, are a number of Muhammadan brick tombs, mostly decayed, under and around a fine Tamarind tree; and as the Muhammadans invariably selected the site of a demolished Hindu shrine to locate themselves on after death, the occurrence of these tombs, added to the outcropping of fragments of walls, built of the old, large, Hindu bricks, is to me conclusive evidence of this mound inshrining old Buddhist or Hindu remains: but of course it is vain to hope to explore a mound whereon stands the great rambling two storied house, which at the lowest calculation must be worth several thousand rupees, and is now private property, to say nothing of

the associations, connected with its having been built and having been the residence of such a worthy officer, and good man, as Augustus Cleveland.

The river Ganges must once have flowed at the foot of the Temple or Stupa or whatever other object has now crumbled into a smooth surfaced gently sloping mound; at present, a thin stream runs past it for part of the year; it appears to me however that at some period, the mound was a sort of island, as the ground on the landwardside, is, at a short distance off, still very low; could I afford it, I would like to purchase the house to explore the mound.

Object No. 9. Are the famous Bhagalpur caves: they have been noticed by travellers and Archæologists, and the buildings that once stood over their entrances as vestibules, and to protect the caves from rain, (which if it once got in would of course remain in the cave till it got soaked up by the clay, for the caves are in a kind of hard clay,) have been drawn, certainly once, by Lieutenant Bacon in his " First impressions of Hindostan (plate facing p. 282 Vol. I). The best account, to which I can add nothing except that the buildings protecting the entrances have fallen and are falling, and ought to be preserved, by pursuading the owner, (a rich zamindar) to occasionally repair them; is to be found in Cunningham. Vol. XV. I will only add that there are two series of caves; over the entrance of each of which brick buildings have been built, (besides minor ones) of which Cunningham notices only one. I have examined both, and as there is really nothing of interest about the one, not noticed by him, and as it is similarly a natural cavern, in the gravelly clay of the high bank of the Ganges; I content myself by a reference to his very interesting account.

Object No. 23, the fort of Karangarh, has been already alluded to; it is variously ascribed to the Karna Raja of the Mahabharat, and to Karna Dahariya, whom I identify with Deva Gupta Karna Deva, the son of the great Aditya Sena. It is difficult to assign, it with any certitude, in the absence of all exploratory trenches, to either of them; but judging from the bricks, which are 18 inches one way, by over 3 inches thick, I feel that the probabilities are, that the fort belongs to the older Karna, as bricks of over 3 inches thickness, had ceased to be burnt by the time of Karna Dahariya. Hiouen Thsang's mention of it, (and he visited the place before Deva Gupta Karna Deva's accession,) is also evidence in assigning to it a higher antiquity, than the latter end of the 7th century.

Of the subsequent history of the fort, little is known; it must have stood the seige and capture alluded to in the Dasa

Kumara Charitra, and must therefore have been, not only in existence, but the seat of the Anga Kings, at the period. I can however find no Sinha Varmma in the lists, and am therefore led to conclude, that if a king Sinha Varmma existed, he must have done so during the troubled times between the Gupta fall, and the rise of the Senas; or just before the Muhammadan conquest. As Ananta Varmma is mentioned in the story as having been killed just before the story opens, and there was a real Ananta Varmma, King of Magadha, it might be possible to place the events at that period: any way, it is clear, that when the story was written, about the 11th century, a fort (and that fort the present fort of Karangarh I take it) existed in good order, capable of standing a seige.

That it was not in good order in the Muhammadan period, may be inferred from the circumstance, that during the various operations of the war and invasion, (1) of Bakhtiyar Khiljy, (2) of Baber, (3) of Humayun, (4) of Sher, (5) of Akbars Generals, (6) during the military revolt in Akbar's reign, no use appears to have been made of it; at the same time the skirmishes in the vicinity of Bhagalpur, during Alivardi's rule, and the order of Suraja Daula to Law to remain in Bhagalpur till orders for an advance should reach him, imply some sort of fortified position there, which could be held, and which assured in some measure, the safety of the defenders.

During the British rule, the fort has never been used as a place of defence, but troops were quartered here, and the barracks now empty still exist within the fort in good order and kept up by the P. W. D.

At present, there are two small modern Temples, at the N.-W. corner of the fort; here in the courtyard, are collected a number of fragments of sculpture, among which are to be found figures; entire, and mutilated, of Buddha, as well as figures of the 4 armed Vishnu, of Durga or Parvati, and of Siva. Some fragments of the scroll work lying here, would lead to the supposition that remains of the early Gupta period lie buried, as it is improbable that any one would take the trouble to bring battered fragments from a distance, to throw them down at the foot of the pipar tree in the Temple Court; but the greater number of the fragments, point to the later period of the Pala and Sena dynasties; 9th to 12th centuries. The existence of these fragments within the fort, is however clear evidence, that excavation would bring to light others.

I also picked up, among the rain washed debris of the ramparts, fragments of pottery; both of glazed tile work, and of the primitive black pottery with a natural sort of glaze; the

former no doubt comes from the ruins of some Muhammadan Masjid or Tomb, and as the remnants of tombs still exist on the Eastern ramparts, (right on the top of the ramparts not within the fort) it is an indication, not merely of the existence of Muhammadan Masjids and Tombs, but even a clearer indication, that the fort was never used as a fort in the Muhammadan period; a conclusion which I have already deduced from other considerations. The black pottery however is of the kind which is found in the remains of the first two centuries before or after Christ, and is a valuable indication of the existence of very early remains in or near the fort.

Besides these objects of interest in the city of Bhagalpur, mentioned in the Bengal list, there are the following, which have not yet been examined, or only examined very partially. Numbering them in continuation of the numbers in the Bhagalpur Circle, of the Bengal list; they will be:

No. 116.—Shahjangi; Dargah, Tank, and Mounds.

No. 117.—A Masjid in Kazi Chak said to be old.

No. 118.—In Shujaganj Muhalla, Munna Dahu's Masjid.

No. 119.—A Masjid in Mashak Chak.

No. 120.—A Masjid near Shakrulla Chak.

No. 121.—A Masjid near the railway overbridge at Mujahid Chak.

No. 122.—A Masjid in Chauki Niyamatpur.

Of these the Masjid at Kazi Chak, No. 117, is said to possess a dated inscription; it is possibly the one mentioned by Hunter, as having an inscription, which records its erection by Kwaja Ahmad Samarkandi, faujdar of Sarkar Mongir, in A. D. 1622-23; but as I have seen as yet neither it nor any of the following ones. I can say nothing about them.

No. 116 the remains at Shahjangi have however been superficially examined: they consist of a noble tank, which was deepened by the Magistrate during a scarcity, with convict labor, a Government grant, and private subscription; a long inscription in English and Persian, let into the North wall of the West Ghat, not only records the fact, but gives the names of all the more important donors. On the masonry of this Ghat, are set, some old pillars, which are said to havebeen found lying here; they consist of 2 pillars 2 feet 3 inches square and 2 thin granite pillars, 2 dwarf pillars, and of 4 other pillars said to have been brought from Barari; the first 4 pillars, which were found here, are no doubt some of the yield, in the course of time, of the immense mound of brick ruin, which literally forms a sort of high

rampart on the West side of the tank, and is undoubtedly Hindu; whether the two dwarf pillars were found here, or brought from elsewhere, my informants could not tell me. There are also pillars let into the Eastern Ghat, which will be mentioned in their proper place.

The long line of mounds, which extends more or less along the entire West bank of the tank, culminates in a Darga at about one-third of the length of the tank from its Southwest corner: the ascent is steep, and some attempt at regular steps had been made at some past period; the Dargah, which is known as the Dargah of Hazrat Pir Shah Jangi, consists of a white-washed brick tomb, on a massive raised roofless platform, within a small courtyard, inclosed by a niched, and whitewashed, brick wall. The platform is garnished in various places, with strips of sculptured stone, taken from some demolished Hindu building; and a few fragments also adorn the walls; but the doorway on the East, leading into the inclosure is ornamented with the black chlorite sills of some Hindu temple, with elaborate and very beautiful and profuse carving: possibly the smooth lower sill, used as a step, contains an inscription, and sculpture, turned face downward, for the "faithful" to tread on constantly.

Outside the inclosure, remains of old, and very massive walls and platforms, of 12 × 8″ bricks set in mud, literally cover the entire mound, from the foot to its summit; there being no continuous space of 10 or 12 feet, where bricks set and in situ are not found by superficial scratching with a sharp pointed hard bamboo; further to the rear, a long spur juts out far to the West, to a distance of over 150 feet in undulating billows of ruined brick work; and minor spurs jut Northwards and Northwest wards: here, in and about this mound, to a distance of about 200 feet in breadth by 350 in length, the brick remains lie thick, and almost at the surface; to their North and South, there is less of brick work outwardly visible, though the mounds run on, almost the whole length of the tank.

The mounds were visited by my revered Chief General Cunningham, and specially commended to my attention, before his departure, as objects very well worthy of careful examination, whenever the opportunity should occur; they have also been visited by the present Director-General of the Survey, who informs me that he feels assured, the remains are not the remains of a Stupa; no one I guess ever supposed them to be the remains of a or one large Stupa; but it goes without saying, that among the miscellaneous ruins; remains of some *minor* Stupas may be found; and it is perfectly certain, that whether Stupas, or temples, or monasteries; here is to be sought, and found, much valuable information regarding the Archæology of Bhagalpur.

If nothing but Stupas are to be explored, then has Archæological research in Bengal already reached its limits; for Stupas are such conspicuous and easily seen objects, and Bengal is so thickly inhabited by a sharp witted people, ready to take advantage of all available resources, that unlike the backward tracts in the Panjab and the North-West, whose superstition-bound people fear more or less to dig into old mounds, they would long ago have dug up the Stupas and built houses with the materials; and what between Archæological explorers, professional and amateur, and an enterprising body of inhabitants, there are now no Stupas unexplored in Bengal. Except those, which, from the circumstance of being the jealously guarded private property of rich landowners, or the more effectually guarded sites of Muhammadan Dargahs, or of temples, Jain or Hindu still in use, have escaped destruction, not a single Stupa available for exploration is known to exist; and those that exist thus guarded, may be counted on the fingers of one hand, and are not likely to become available for exploration by amateur or professional antiquarians, during this generation.

But a Hindu Temple or a Buddhist Monastery, are as likely to yield valuable information as Buddhist Stupas. And in regard to their value for Architectural Archæology, as apart from their sculptural value, a temple is of greater interest than a Stupa. But to revert to the remains.

On the South banks of the tank, there have been but few buildings, as only a few bricks scattered here and there attest their existence. Similarly on the North bank, few remains exist; but as along the North bank, runs a public road; any remains there, must long ago have been levelled and removed.

On the East bank there now stand 2 longish rows of buildings apparently built for the accommodation of pilgrims, as I could find no one inhabiting them; they are quite modern, and of no interest; but imbedded in the masonry of the Eastern Ghat, are a number of very massive granite pillars, of various patterns; they are nearly 10 feet high, and nearly 2 feet square, standing on bases 2 feet 3 inches square; I could obtain no information regarding them, from the people, beyond the fact, that they had been set up in their present position, on the newrepaired ancient Ghat, during the time the tank was cleared and dug in 1843.

Of the local history of Hazrat Pir Shah Jangi, I could get no details beyond this, that he fought and conquered the infidels. Drawings of the pillars with details will be found in part II of the report.

With this, closes for the present my information of the antiquities in Bhagalpur itself, and I proceed to notice the

following objects in the District which have been seen by me or of which I possess reliable information.

Object No. 10 of the Bengal list is the remains of an extensive monastery, but it is hopeless to attempt a survey or plan of it, or even to intelligently describe it, without further removal of debris. What is known of it, will be found in As. Soc. Journal Bengal Vol. XXXIII p. 361; and there is also a brief notice of it in one of the Journals of the Royal As. Society; and all the known information will be found collected and summarised in Cunningham Vol. XV. I can add but little to the information, but as nothing further is now obtainable without further research even that little may be of interest.

Lying neglected among the debris is the base of a Toran pillar; I say a Toran pillar, as it precisely resembles the bases of the Toran pillars exhumed in Buddha Gaya, about which there is not the shadow of a doubt; the base measures 2 feet 10 inches square and 13½ inches in height; the mouldings being a fillet of 8 inches in height, a Cyma of 4½ inches, and an upper fillet of 1 inch; the surface of the upper fillet, being 5 inches behind the surface of the lower, in other words the measurement of the base below being 2 feet 10 inches square, the upper square is 2 feet each way; on the upper surface, are 3 socket holes in the middle, in which apparently corresponding tenons of the pillar above fitted.

Besides the base of Toran, the fragment of the pillar of a Toran, is also lying near the excavation. I say one of the pillars of a *Toran*, because on this pillar, there is the same recessed panel for the reception of some flat bas relief, to be secured by bolting, as there is in the corresponding pillar of the Toran at Buddha Gaya; this Toran was apparently a different, and a larger one, as the base of the pillar is 2 feet 10 inches square, and it could not therefore have fitted the 2 feet square upper surface of the base described above; the age of this toran, judging from the sculpture, must be about the 4th century, as it resembles closely the remains at Eran and Besnagar in its style of sculpture, a similar Kumbha pl. XXVII with leaves but little removed from the forms in plate XXIX of the 10th Vol. Archæological Reports, being the characteristics; this would agree fairly well with the date already deduced by Cunningham from the Coins in the Stupa adjacent, and with the date assigned to it by Dr. Rajendra on palæographic grounds. I may note, that the height of the sculptured lower part of the pillar, is 1 foot 11 inches; over which comes a plain surface; the total height to the recessed panel being 2 feet 4 inches, and the recessed panel being 2 feet wide by about 2 inches recess; dimensions which correspond fairly well with the Buddha Gaya Toran panel.

In the village adjacent is the fragment of a round pillar, similar to the square Toran pillar already noticed.

There is the pedestal of a Statue also lying in the ruins, which must be the pedestal of a Statue other than the copper one mentioned by Rajendra and Cunningham; it has of course a shallow sunk recess on its surface, for receiving the base of the Statue, and, what is not usual, a spout for the outflow of libations; as Statues of Buddha do not receive libations of water, the pedestal must have belonged to some one of the later Buddhist divinities. The pedestal measures 1′ 9″ in length by 5″ only in width, and is of granite.

Several granite slabs of large size measuring 2′ 6″ × 7″, 2′ 6″ × 6″, 1′ 9″ × 7″, and 10 inches in thickness, lie scattered in the diggings; also the remains of a pilaster 1 foot 9 inches across, in front.

Of the excavations themselves all I can say is, that a more utterly destructive excavation it has seldom fallen to my lot to see; it rivals the excavations made by the kanungos deputed by the Deputy Commissioner, to excavate Sirpur. Broadley's much abused excavations in Nalanda, bad as they are, are positively models of careful research compared with these. Not a floor but has been broken, not a wall stands, all that does stand now, is the foundation of the monastery, *below* the floor level; and even these have often been broken in places: as to the courtyard, the level of it was long ago reached and cut through.

But luckily the entire range of mounds had not been excavated; and as, from the apparently unbroken straightness of the Southern edge of the mound, I conclude it to have been the back, while the numerous projections, indentations, and the isolated mound on the North, equally indicate, that on that side was the face of the monastery or Temple; there is hope, that if Government authorise a proper exploration by trenches, the more important portions will be found, not quite utterly destroyed; what have been destroyed beyond hope, are the Cloisters, or Chambers, round the inner courtyard, especially round the 3 minor sides; while the real front is yet buried under rubbish.

I made out, that there stood side by side, two monasteries, each with its court surrounded by Chambers, with Verandahs opening inward into the court; at the North-East corner of the greater monastery, there still stands intact, a high conical mound, round in plan; and at the North-East corner of the second monastery, stands a still higher oblong mound; besides these; the real facade to the North, as well as the outer faces on the other

3 sides, are yet buried, and presumably untouched by the destructive hand of the amateur explorer; and hold out very fair promise of important knowledge of the architecture, if of nothing else, of the period.

About half a mile West from the mound, stands, what General Cunningham calls the fort of Karangarh; it is a mound about 500 paces long by 300 paces wide, surrounded by a moat, which on the South face, is a thousand paces long. I conclude therefore that a large portion of the mound or fort has been already cut away, and levelled, as indeed it must have been, to allow of the Indigovats, and other accessory buildings being built, and a fine broad road being driven on and along the East face; on the North the fortress abutted on the river. The highest point of the mound is crowned by the Baneli house, belonging to the Baneli Raja: at various places in the mound are yet to be seen the protruding tops and ends of brick walls; the bricks being 8 inches in one dimension; probably the usual $13 \times 8 \times 2\frac{1}{2}''$ which is the size of the bricks in the mound dug into by Mr. Harris.

The fort appears to have possessed one gate or entrance to the West, I could notice no depression corresponding to a gate on the South or on the North river face; on the East, as before said, the outer ramparts have long ago been cut and levelled.

Excavation here is not likely to be permitted, and all that can be done is to note what can be noted from surface indications; I infer that the great mound on which the Baneli house is built, is the ruin of some great Palace or Temple, which for security was inclosed by a rampart and ditch. As the remains here have been ascertained to range to about the 3rd century circa, and as we know the Paramount Sovereigns made Pataliputra their Capital, it appears more probable that it is the remains of a Temple, rather than of a palace, that lie inaccessibly buried beneath the foundations of Baneli house.

A few pieces of sculpture, apparently Buddhist, have been found in the fort, and now lie in the grounds and near the Veranda of Baneli house.

This old fort is not mentioned in the Bengal list and I propose that it be added to the list in its future issue, as No. 123 of the Bhagalpur Circle.

Object No. 11 is sufficiently noticed by General Cunningham in his fifteenth Volume; as all that I can add to the information there contained, properly belongs to part II, it will be found there.

It is convenient before quitting Sultanganj to notice objects Nos. 18, 19 and another object not in the list, a Masjid on the

Baiskaran Hill, close to the Jahngira rock on the mainland, which I specify as object No. 124; as they are all in Sultanganj.

Nos. 18 and 19 have been noticed by Cunningham Vol. XV.

It appeared to me exceedingly improbable that such a remarkable place as the Jahngira rocks should not be found in the traditions of the Mahabharata or of the Ramayana or even of the Puranas; but so it is; and I can only account for it by supposing, that these remarkable rocks were not in the river bed at the time, and had not consequently become objects of Pilgrimage.

It has been shewn above (Supra p. 48) that about 750 A. D. Some remarkable change took place in the course of the Ganges, by which the ancient City of Pataliputra was swallowed up by the river. The change in the course necessary to do this, is not small; it means that the river at Patna moved Southward between 2 and 3 miles, and the extent of its move is attested by the great width of the sands at the modern Patna, where, to cross over direct to Hajipur or Sonpur, a sandy island, about 4 miles wide has to be walked across.

I have connected this change with the change in the course of the Son about that period. (Vol. VIII Arch. Reports.)

But such a change cannot take place without affecting the entire river down stream, (and by reflex action later and less materially up stream) with the up stream action, we are not at present concerned, but it is important to trace the probable inevitable change down stream.

In theory, such a change would cause a deviation, first one way for a wave length, dependent on the fall of the river, and on the extraneous (positive or negative) force brought to bear on the current, modified by the resistance of the banks to erosion, by internal friction, and not unappreciably, by the general direction of the flow with reference to the direction of the earth's motion on its axis; followed by a corresponding reflex wave-length; the wave lengths increasing in amplitude and diminishing, in (height I can scarcely call it, but) deviation, from the original direction, till distance and other causes have dissipated the new energy imparted: there will consequently be waves of deviation to the right and left of the original course with nodes at the points where the deviations crossed the original lines of flow, at which the river would not have altered its position but where the only alteration would be in the *direction* of the current. The difficulties however in the way of the theoretical solution of such a problem are insuperable.

But luckily in this instance there is no need for such a solution, when the maps give the practical solution of the problem. It will be seen (I refer to Indian Altas Sheets Nos. 103 and 112) that such changes *have* taken place from Dinapur downward, the nodes being at Barh, at Surajgarah, at Mongir, at Jahngira (a little below the city) at Kahalgaon at Sikligali at Rajmahal and at the return bends of Mongir and Kahalgaon; and the direction of the deviations, moving down streamwards, being to right between Dinapur and Barh, to North or left between Barh and Surajgarah, to right between that and Mongir, to left between Mongir and the bend, to right from bend, to Jahngira, to left from Jahngira to Kahalgaon, to right between Kahalgaon and bend, to left from that to Sikligali, and to right or Southward between Sikligali and Rajmahal. The amplitudes of the waves however do not follow the theoretical law of increased length according to the distance from the source of disturbance except in the first two wave lengths, simply because extraneous circumstances, in this case unerodable rocks, impose an absolutely insuperable limit, to the deviations, at Mongir, at Kahalgaon, at Sikligali, and at Rajmahal; and the abrupt turns of the direction and force of the current, bear ample testimony to the fact, that but for the obstacles, the amplitudes would have been far longer and the intensity less. Below Rajmahal this may be seen very clearly where one single wave length reaches down to Godagari near Rampur Baulcah, but this by the way, the further changes not bearing on the subject in hand.

It is now evident that as a node is at a point about a mile and half below Jahngira and two miles below the fort of Karangarh just described, object No. 123, (not the more ancient fortress in Bhagalpur) the river before 750 A. D., must have flowed north of its present course; consequently the rocky islet on which is now perched the Temple of Ajgaibi Nath, would not have been an island, nor would the Baiskaran hill be on the banks of the river. They would be ordinary hills, and rocks, rising out of the plain, in no way different from the numberless others all over this, and every other hill possessing district, and therefore in no way challenging attention, and attaining to sanctitude as remarkable objects; consequently not mentioned among the tirthas enumerated in the Mahabharata Vana Parvan.

It is not as if the Mahabharata did not mention any tirthas in the Bhagalpur district, the Tirtha Yatra Parva, has three separate notices, of some, then very well known, but now utterly unknown tirthas, close to Bhagalpur (Sect. LXXXIV. Pratapa Chandra's trans. of the Mahabharata Vana Parva). "Repairing then to the river Kauçiki that cleanseth from even great sins,

one should bathe in it. By this, one obtaineth the merit of the Rajasuya Sacrifice. One should next, O foremost of Kings, proceed to the excellent woods of Champaka. By spending there one night, one acquireth the merit of giving away a thousand kine" again. "Proceeding to Champa and bathing in the Bhagirathi, he that sojourneth to Dandāparna acquireth the merit of giving away a thousand kine" again (Sect, LXXXV.) "Arriving at Champa, and bathing in the Bhagirathi, and seeing Danda, one earneth the merit of giving away a thousand kine." The hermitage of Rishyasringa is also pointed out; Mandara is mentioned, and some other places in and near the Bhagalpur district are mentioned, and it appears inconceivable that the hermitage of Jahnu Muni supposing *that it was then traditionally located in the remarkable rocks of Jahngira* should have escaped all notice.

It is remarkable that the characters of the inscription on the boulder in the Island as well as the characters of the few other inscriptions on the Baiskaran hill (See Cunningham Vol. XV. plate XI bear out the date of about 750 as the period when Jahngira became an object of religions attention. The characters it will be seen are of about the same type and age as in the Deo Barnarak Inscription (Cnnningham XVI, plates XXV, XXVI) which he ascribes (p. 68. Vol. XVI) to A. D. 758.

But there is further evidence of the date of the sculptures being about 750 A. D. or later. I find on classifying the rock sculptures; that there are, more or less, out of an aggregate of 120 sculptures, (all there is besides those in the temple).

47 figures of Vishnu including the Rama, Krishna and Vaman inearnations and the Chaturbhuja form.
2 of the fish incarnation of Vishnu.
1 of the Varaha incarnation of Vishnu.
1 of the Narasinha incarnation of Vishnu.
3 of the Parasu Rama incarnation of Vishnu.
2 of the Buddha incarnation of Vishnu.
1 of the Kalki incarnation of Vishnu.
1 figure of a sleeping female which I take to be Maya Devi's.
15 Lingams.
3 figures of Siva with the trisul.
1 „ Siva Naked (obscene).
9 „ of Ganeça.
2 „ of Haragauri.
5 „ of Brahma.
22 „ of Aditya.
1 „ of Ganga very fine.
4 „ unrecognised and broken figures.

So that there are realy more figures of Surya or Aditya than of any form of any other divinity.

The evidence of the Udigiri sculptures, of Eran, of Pathari and of Afsar, all tend to shew that in the earlier Gupta period, the Varaha incarnation was the form of divinity in fashion; while there is equal evidence from the Garhwa sculptures, and the various sculptures in Magadha, that at least from the great Aditya Sena downward, the worship of Aditya was more in favor; and if one may make a conjecture, I should say that the popularity of the worship of Aditya, was due in no small measure to the name of a favorite, and undoubtedly powerful, Paramount Sovereign, being Aditya Sena; and to the fact of his affecting the worship of Aditya himself.

The circumstance of a single figure of the Varaha incarnation among such a profusion of sculpture, and the great preponderance of the figures of Surya appear to me to indicate, in a very significant manner, the age of these sculptures to be subsequent to the period of the great Paramount Sovereign Aditya Sena Deva. An inference, further borne out, by the scarcity of the figures of Ganga, which in the earlier Gupta period was a favorite subject of sculpture.

I have now I believe shewn, with a very high degree of probability, that the establishment of the Jahngira rocks as a place of pilgrimage and of worship, indeed that their very existence as a rocky *Island*, dates to about the middle of the 8th century; and I call to attention the silence of Hiouen Thsang regarding the rocks here, while he notices the rocks at Kahalgaon, as further evidence in support of the theory.

The present temple which is quite modern inshrines or rather is built over what were evidently previously existing rock sculptures; the object of worship, being a figure of Vishnu, on the Ananta Naga, flanked to the right and left by Brahma on the lotus with his goose, and an obscenely naked 2 armed Siva with his bull.

The picturesque beauty of the Jahngira Temple-Crowned rocks, has attracted the notice of several modern travellers, and a beautiful illustration and a brief notice of it is to be found in Vol. II of Emma Roberts' Hindostan page 78. Major Archer also notices the rocks. Vol. II p. 119. Bishop Heber notices both the temple, and the Masjid on the adjacent bluff; the Artist Hodges also notices it, but though he praises the situation chosen by the Gosain of the Temple, as "A proof of his taste and of his judgment," he passes a very severe, and I think well merited condemnation, on the sculpture; "I am concerned I cannot pay so high a compliment to the Art of sculpture among the Hindus,

as is usually paid by many ingenious authors, who write on the religion of Bramah. Considering their works as I do with the eyes of an artist, they are only to be paralleled with the rude essays of the ingenious Indians I have met with in Otahiete and on other Islands in the South Seas." He forgot however, that much of the rudeness of the sculpture was due to the unsuitable nature of the rock, a very coarse grained granite, and at least some to the weather and time.

Lieutenant Bacon's account is however the most interesting; he also gives a plate; his version of the legend ascribes the destruction of the original temple (of Harnath Baba?) which Cunningham concludes was built a century before the accession of Jehangir, to Aurangzebe; Aurangzebe is so well known as a temple destroyer, and the story bears on the face of it such an appearance of truth, that I extract the passage Vol. I page 287."

"All that I could collect of the ancient history of these rocky strongholds, was from an old *Fakhir* in the village; together with comments and other hints by a respectable old Jemmadar, who had formerly served as a soldier under Colonel Skinner. These men informed me, that, during the reign of Aurungzebe, the temple, which has since been rebuilt, was the haunt of a band of *Jogis*, who had made this place their head quarters, and the depot of an immense treasure, the fruits of their extortion. When Aurungzebe marched upon Benares, he detached a small division from his forces against Monghyr, with orders if they were successful in this first object, to proceed down the river to Jehanghira and sack the treasury of the old miserly devotees. The party were fortunate in their execution of these orders, and carried off from the latter place an enormous amount of specie, besides vast numbers of valuable jewels and vessels of gold: the *looht*, or booty, is said to have amounted to fifty lakhs of rupees or £ 500,000 English money. The *Jogis* were driven forth from their hive, and the original temple was partially destroyed; that which now stands upon the island is a modern erection, though built upon the foundation and of the materials of the former one. This fact is borne out by the evidence of the masonry, but for the verity of the details just given I will not be answerable, my information being collected from rather a doubtful source."

There is elsewhere, a somewhat different version of the seizure of the treasure of the Mahants of the rocky Island by order of Aurangzebe, and of the destruction of the temple; but I cannot now recall the authority to my memory.

Hunter in his statistical account has a brief notice of the temple and rock; and it goes without saying that Buchanan Hamilton notices it also; but of all the legends connected with

these rocks, the most romantic has been thrown into a charming little poem, entitled "The Hermit of Jahngira," by the Eurasian poet DeRozio which I very strongly commend to the notice of those romantically inclined.

Little more remains to be said: the Masjid on the Hill is evidently built on a Hindu Site, and with such Hindu materials as were available, and as it is of no particular interest architecturally, or historically, this brief notice of it is sufficient; there are numerous shallow reservoirs cut on the rocky surface near, and to some way down the hill, most probably by the Hindus; but any mythological rock sculptures there may have been, have long ago been destroyed by the builders of the Masjid, which is itself now in its turn falling into decay; and being of no interest deserves no effort for its preservation.

At Dumraon or rather close to it is a mud fort ascribed to the Khetaura Rajas, there is little now to be seen above ground, but so far as superficial examination shews, the walls appear to have been of mud, surrounded externally; and it will surprise most people, internally also; by a once wide and deep moat; there were 4 round towers at the corners; and outside the moat, at the South-East corner, as well as on the slope of the tower itself, I noticed brick ruins, the bricks being 12 x 8 or thereabouts; the outer mound is certainly a Temple and the roots of a fine tamarind now envelope the bricks of the ruin partially; it is more difficult to decide on the nature of the brick ruin on the slope of the South-East tower, but it appears to me to be the ruins of a Muhammadan Tomb.

The reason of the inner moat is however seen on observing that within the outer inclosure was a second inner line of walls also of earth; between these walls, on the East side, is a low mound burying the ruins of a temple; a gateway in the outer ramparts, gave easy access to the Temple, while a corresponding gate in the inner ramparts facing the temple and the outer gate, led into the inner fort. I could not ascertain the gates on the West face, as the ramparts on that side have mostly sunk down, or been cut away and levelled, for cultivation; but the towers at the four corners, and two in the middle of the longer sides, the East and West, still remain; there were gateways probably on the other two sides also; certainly on the South side, but the present road has cut through the North side, Hunter says there were seven gates which is quite possible if the gates of the inner fort and of the Citadel be included, the outer ramparts had assuredly however no more than four.

Within the second line of ramparts which do not appear to have possessed towers at the corners, is a smaller raised squarish

plot, which I guess was the inner fortified Citadel, and I could see that there were brick ruins now crumbled into low mounds within; but the dense Jangal baffled further research.

There are several artificial pieces of water, once square tanks, now merely low roundish ponds, between the inner and outer ramparts; I counted five; on the banks of three of which, once stood buildings (small temples probably) of some kind, of which such small remnants of brick as were not worth carrying away by the villagers, still lie scattered, to attest their former magnificence; while at the outer as well as the inner East gates, a few bricks seem to shew that the gateways were once, more than mere gaps in the earthen ramparts. But the buildings whatever they were, in and about the fort, have all utterly disappeared, and nothing but exploration by trenches will disclose the probable age of the fort. I recommend at least one good trench across the extensive low mound, between the East gates of the outer and inner ramparts, and one in the Citadel. The fort is noticed as object No. 113 in the Bengal list.

The legend regarding the last Khetauri Raja, who fell fighting to the last, in this, his last stronghold, against the Muhammadans, is given by Hunter; but in the absence of exploration by trenches, it is not possible to know what credit to attach to the legend.

At Amarpur or rather near it and to its South-West is a large tank with extensive brick ruins on the South-East corner, and ruins also on the other side. The old ruin is stated in Hunter's Statistical Account, and by tradition, as well as by still existing traces, to have been a Masjid or rather more than one Masjid. Hunter relates the tradition of its having been pulled down by an avaricious zamindar, in search of treasure, of which he found enough to go on carting away to a place of safety for 7 days. I dismiss this as an idle invention of the credulous people of the village, but I accept as a valuable piece of information, the tradition of its having been a Masjid, as the tomb of some important local magnate, still stands adjacent, and has a fine inscription in black basalt let into its outer wall. The inscription has not been read, but I judge from the form of the ornamental Arabic writing that it belongs to about the period of Sultan Alauddin Husain Shah. It is numbered 103 of the Bengal list, and its decipherment is very desirable. In face of this inscription, which appears to belong to the tomb, and I connect the tomb with the now demolished Masjid and Dargah, I hesitate to credit the tradition which ascribes the ruins to Shah Sujah.

The place is called Takht Banahra, it is noticed in the Bengal list as object No. 114.

On the opposite side of the tank stand the ruins of an indigo factory with a fine flight of steps down into the tank.

A mile and half off the road from Belhar, (where there is an indigo factory) to Katoriya, and about 4 miles from Belhar, are some low hillocks known as Kailas Pahari, close to the Banruah river, and near Matihari village, on the 28th mile Belhar-Katoriya Road, on the old line of road. On and at the foot of these hills, and close to them, in the scrub jangal, are several mounds, exclusive of the ruins or rather traces of brick buildings on the summit of one of the small hills; there are at and near its foot, 3 detached mounds, then further on 3 more mounds separated from the last, but running into each other; after a small space is a row of 3 other detached mounds; lastly a solitary mound.

The first 3 mounds, as well as the 3 mounds which join each other, appear to be the ruins of an old city, where, judging from the occurrence of iron slag, I infer the manufacture of iron from the ore which is found in the adjacent hill, was carried on; these 6 mounds are thickly covered with fragments of pottery rolled pieces of brick and iron slag: the village apparently stood here; they cover a space of about 1,000 feet square.

The 3 mounds beyond these, are however the ruins of Temples; on the main mound, which measures 200 feet long by 100 feet wide, and the sides of which were once supported by ornamented brick revetment walls, of which portions still exist, stood no less than 9 Temples of various sizes, of which remains more or less still exist; of 7, only the foundations, and an occasional fragment of a wall; but of 2, the sanctums exist yet intact, though the upper works have all gone: in front of the South-West of these two, are now set up 2 or 3 large quartz crystals, one, a cubit in length, as well as a number of oblong mottled rolled boulders, such as are used occasionally, to supply the place of the more highly finished Saivic emblem in small villages; there are also among them, the Votive horses and elephants of baked clay, which are generally offered by the poor, who cannot afford anything more valuable, as offerings to the power worshipped.

The mound on which these temples stood measures 200 × 100, it has a lower mound standing out of it at right angles, on which the traces of some brick buildings exist; a short distance off is another mound, about one hundred feet square, on which stood a large temple, the walls of which have obviously been dug out not very long ago; as the adjacent village possesses no brick remains, I infer the bricks were carted off to some distance.

The two temples which still stand, as mentioned above, in a partially dismantled state, must have been built during the Gupta period; though of no large size, the sanctum of the more perfect one being but 6½ feet square internally and fifteen feet square outside, they are of great interest, and would be of great importance, if excavations brought to light inscriptions; for not only do the doorways appear to have been of the form which is peculiar to the Gupta Temples, of an upper door sill longer than the lower, so that the lines of mouldings and sculpture have a small piece of return at each end; but the figures of Ganges and Jamna occurring on the lower portion of the main side-jambs, are additional proof of their great antiquity; but their great importance arises from the circumstance, that they inshrine, as objects of worship, sculpture which recals at once the sculpture at the great Adina Masjid; the central figure being inshrined as it were within, and canopied over, by the trefoil arch, with the ends finished off into Magars with raised snouts, and the bird legged Gandharva riding on them, just behind their conventional raised head and projecting eyes. The sculptures at Adina are perfect in all parts, except at the ends, where clearly the iconoclastic spirit of the Muhammadans, destroyed the human headed bird; this sculpture now enables to be restored with absolute certainty, what could hitherto be filled in only conjecturally, and were a dated inscription to be found among the ruins here, it would fix from the very strong similarity of the execution, no less than of the general lines of the exquisite sculpture here, to those in the Adina Masjid, the date of the temples which were demolished to build that superb Masjid. I may add that the material a close grained hard black basalt. capable of a high polish resembles precisely the material used in the Adina sculptures.

The figure worshipped in the Sanctum is that of Haragauri; on the pedestal are the Bull and the Lion flanked by Ganeça on the rat, and Kartikeya on the peacock. From the central figure on the architrave of the doorway, this temple was apparently dedicated to Parvati, while the adjacent one was dedicated to Siva, and now inshrines his symbol with its accompaniment the Argha still in situ, and undisturbed, though along with it, there is to be found inside, (and apparently brought from elsewhere) a misproportioned figure of Aditya.

The ruins of a temple facing this, inshrined a sculpture similar in its exquisite workmanship and forms of scroll work and trefoil arch, to the one described above; but in this case broken, and only the fragments exist; like the last it was of Haragauri.

I consider the judicious use of a few trial trenches here in hope of discovering some object which would accurately, or at least within a limit of a few years, define the date of the temples, very desirable.

The ruins here are not in the Bengal list, and I would insert them in a future issue as object No. 115.

Objects Nos. 24 and 27 of the Bengal list have been noticed in Vol. VIII Arch. reports, but certainly No. 24, and probably No. 27, will need a second visit; with some trial trenches. Without something more than a look at the surface, it would be useless to visit them. A worn inscription used to be near Kherhi, and as it was an object of worship, it was difficult to touch it. It may have since been deposed from its position as a divinity, and consequently may admit of being copied.

Objects Nos. 21 and 22 have been noticed repeatedly. In the Journal As. Soc., in the Archæological reports Vol. VIII, in Buchanan, in the Indian antiquary, and in Hunter's Statistical Account of Bengal; it is only necessary to add here, that the statements made regarding the coil of the great serpent being artificially cut on the face of the hill are not borne out by facts: there is not a single chisel mark of any sort whatsoever, which could be tortured into a portion of the curve of the snake coil, but as I have said in Vol. VIII, the natural rock, which shews a tendency to separate, off the smooth curved surface, in flakes, as in the Barabar Hills, but especially in the Kawa Dol rocks, have so separated, leaving attached, fragments: and these attached fragments, with the aid of the imagination may be taken to represent a gigantic coil round the Hill.

Mandar is mentioned in the Mahabharata, not only in connection with the churning of the Ocean. In the Varaha Puruna it is particularised as a place of pilgrimage: a deep tank is mentioned at its foot to the South, as also one on the summit, as also the sapta-dhara and the pancha-dhara at its foot, there is mention also of a cave on its west side, which I could neither see nor hear of: it is also mentioned in Nepalese Buddhist literature, (Rajendra's Nepalese literature) in a manner, shewing, that in Asoka's time, it was the seat of learned Jainas, and incidentally, the passage bears out, in a remarkable manner, Ed. Thomas' supposition, that Asoka professed the Jaina religion, at least in the earlier part of his reign, after his conversion from Brahmanism. The passage runs. "He deputed Supindola Bharadvaja a Yati from the Mandar Hill to preach the true religion every where over his empire."

As Mandar is now and has long been a place of Jain resort and worship, this passage, with the mention of the preacher

Supindola, as a Yati, establishes, not only the existence of a Jain College and shrine in Mandar in Asoka's time, but also shews, that Asoka's so called Buddhism, was really very like Jainism in the earlier part of his reign. What reason or legend accounts for the Jains establishing themselves in Mandar I have been unable to ascertain, the fact of the Jains having had places of worship in Mandar 250 B. C. (though no remains now exist of them) and having now also places of worship there as attested by the Temples on the Hill and several at the eastern foot, is beyond question:

That any Jain remains and Buddhist ones there, were destroyed by violence, or by the withdrawal of royal patronage in Aditya Sena's time, appears probable; but I would, from the figure of Varaha and of Narasinha; the one sculptured on the rock at the very summit, and the other in the cave, and judging from the unfinished outline of the colossal figure known as Madhusudhan, but which after careful scrutiny I feel assured was intended to be finished as Narasinha, ascribe the first discouragement of, if not suppression of the Jains, to Gupta Kings earlier than Aditya Sena Deva; probably to Chandra Gupta II or Budha Gupta; since whose time, down certainly to Aditya Sena, and probably down to the Muhammadan conquest, the place appears to have been a place of Hindu worship, with the Jains on sufferance only. The present Jain Temple, dates only to the British raj, while those at the foot of the Hill, can only date to the period of the last Nawabs of Bengal, when the toleration shewn by the Murshidabad Nawabs, and the British, and the great influence of Jain wealth in the Court of Murshidabad, and with the British, in the persons of the wealthy Seets of Murshidabad, enabled them to rebuilt in safety the old Temples, which less tolerant Hindu Kings had destroyed, and Muhammadan Governors prohibited from rebuilding.

That Aditya Sena dug a tank and cut the steps leading up the hill, appears to be established by his inscription on the rock. No. 105 of the Bengal list; I am of opinion that the tank he refers to, is the upper one, close to the Narasinha cave, while the lower Papaharani *now* the most sacred one, except the Akas Ganga, is a later addition or rather has become the more important, at a later period, as a work of man, for its steps are built of fragments of older buildings; as a natural pool, it is must have existed from an unknown antiquity.

I may add in conclusion, that the reading of the name in the Mandar Inscription, as Ugra Bhairava is incorrect; no such name occurs in any Mandar Inscription whatever.

Close to Mandar is Bausi, which contains a Temple, a Tank, and an interesting gateway, and is entered as object No. 20 but I have not seen the place.

Objects Nos. 12, 13 and 14 are at Kahalgaon. Kahalgaon which is noticed in much detail by Cunningham Vol. XV appears to me to be the place of Sacred Tirath mentioned in the Mahabharata, (the rock cut Temple, object No. 13 is mentioned by Hiouen Thsang.) And the form and sculpture of the rock cut Temple would place it in the earlier Gupta period, consequently the place where it stands must early have been a place of religious worship. It is still a place of worship, not only to the Muhammadans, who have a Darga (object 14) on the level platform higher up, on that same Island, but by the lower class Hindus, who make offerings to the twin divinities Haji and Hajman, who are supposed to reside on, or in, the larger and the smaller rock in the river, at that place.

As the Mahabharata distinctly mentions one Sacred Bathing place in Champa, and I am not aware of any other sacred place in the river, (for Jahngira the only other possible place has been shewn to have become so subsequent to the Mahabharata and even to Hiouen Thsang) I have no option but to identify this place, which was certainly a place of some sanctity at the time of the Guptas, has been so all along, and is so now, (as attested by the offerings made to Haji and Hajman and the Pir's Dargah,) with the Tirtha of Champa; and in that case I would identify the Gangal Dei Hill, with a temple on the top, a little to the East of Kahalgaon, (presently to be noticed) with the Dandaparna mentioned in the extracts from the Mahabharata.

These rocks have been noticed by numerous travellers: Hiouen Thsang praises Kahalgaon and winds up by saying "those who go there to see the place are reluctant to return."

Major Archer only just alludes to Kahalgaon, he mentions the "religious edifices" upon the rocks in the middle of the river.

A beautiful view of the rocks may be seen in Vol. II Emma Roberts' Hindostan, and a brief description, which bears out my statement that the rocks are considered holy to this day. Alluding to the size of the river here she says. "In the rainy season, the river runs roaring through these rocks with fearful turbulence, spreading its broad waters like an Ocean, the projecting points of Colgong and Patergotta forming an extensive and beautiful bay, surrounded by an amphitheatre of hills, from which it is difficult to fancy that a river has supplied the floods that reach from shore to shore."

The artist Hodges also notices Kahalgaon and the rocks: of the country about Kahalgaon he says "The country about Colgong is I think the most beautiful I have seen in India. The waving appearance of the land, its fine turf and detached woods; backed by the extensive forests on the hills, brought to my mind many of the fine parks in England, and its over looking the Ganges which has more the appearance of an Ocean at this place than of a river, gives the prospect inexpressible grandeur."

Lieutenant Bacon however gives such a graphic account of Kahalgaon, its rock cut Temple and Cave and Darga and incidentally throws a new light on Hiouen Thsangs statement why "those who go there" "are reluctant to return," that I extract the paragraphs, premising, that I quite agree with him in his estimate of the beauties of the place in still life, as well as in moving life.—Vol. I p. 277 to 281.

"The scenery around Kahalgaon is beautifully picturesque and varied in its character: from the opposite banks of the river, the view is quiet and charming beyond what is usually met with on the Ganges; the grey hills of the Rajhmahal range form a tender back ground for the deep-toned umbrage about the conical shaped temples overlooking the water. In the centre of the sacred stream are three rocky islands, from which are springing on all sides luxuriant trees and vegetation, for the nourishment of which the scanty soil appears hardly sufficient.

In many places, the rocks are rudely sculptured with mythological devices, and one of the largest blocks upon the top of the westernmost island has been hewn into the form of a Hindu Temple; upon this also there is a deep cavern, into which I heedlessly advanced, but more speedily retreated, in consequence of my olfactory organs being thrown into a state of insurrection by the sickening offence of human putrefaction; for, a few paces within the entrance lay the carcase of a *Jogi*, or other religious devotee, in utter nudity and corruption. A solitary jackal was the only beast of the scavenger tribes to be seen; and this is difficult to be accounted for: the vulture and the kite possess organs of scent, or vision, so acute, as to detect the existence of any putrescent matter from an almost incredible distance; and I could observe several of these harpies wheeling round and round in the heavens, prosecuting their eternal search after filth: after I quitted the place I remarked that when they for a moment alighted upon the body, they again took wing, as if it were unfit even for their foul appetites.

Above this cavern is the tomb of some holy man, which I found beautifully swept and bedecked with flowers; and within the *Tahk*, or little niche at the head of the tomb, were a few

copper coins and a number of couries, or small shells which pass current among the natives, the value of one of them being about equal to the fortieth part of an English farthing. Thousands of pigeons frequent these islands, and in despite of their being such "sweet little innocents," as the ladies called them, I took the liberty of shooting a dozen or so, for my servants and the boatmen.

It has been frequently remarked, that among the native women to be seen in Bengal Proper that is, in the lower provinces of Bengal, there are very few, indeed not one in a thousand, perhaps, who have any just pretension to beauty of countenance; in this opinion I most fully acquiesce, for I verily believe I never in a single instance beheld a handsome native woman in the vicinity of Calcutta. A symmetrical and graceful figure is occasionally to be seen even there, and a well turned ancle is not less common than in other parts of India.

I have been led to this subject by the contrast which the women of Kahalgang present to those further eastward: I saw several at the *ghats* who struck me as being remarkably beautiful, both in feature and figure, although their complexions were exceedingly dark: their forms were particularly slight, and bearing such an air of elegance and graceful ease, as could not fail to attract admiration: their faces too were of a more Grecian mould than I had hitherto seen among them; and in this the effect was considerably heightened by the simplicity of their costume, and the classical style in which the *Chuddur*, or large scarf, was thrown across their figures. There is one charm, and by no means a slight one, which is possessed by a large majority of the native women; I speak of their small feet, and particularly good ancles. and of their free and elastic step, which may well excite the every of any beholding Englishwoman, with her pinching satin shoe and delicate silk stocking. But who. among our starched and tight-laced, though naturally lovely women, would venture to place the charms of her cramped figure in competition with the unshackled graces exhibited among these children of nature? God makes the one, and the mantua-makes the other."

I particularly allude to the vast lake like expanse in which the river Ganges is at were lost here, because I conceive it was here and not at Jahngira, that the holy spot was, where Jahnumuni performed austerities; and this may also be the vast and holy lake into which the Ganges is said to flow in the Mahabharat;—but this is pure speculation.

About 5 miles down stream from Kahalgaon is Patharghatta, object No. 15 of the Bengal list, the place is noticed

by various travellers but Bishop Heber is the only one who gives some description of the remains there. Vol. I pp. 264 to 268.

The first objects of interest at Patharghatta coming down stream are two rock sculptures called Nakta Nakti, which are carved on a boulder that juts into the stream and are drowned when the river rises; there is a shrine of Mahadeo close by to which Boatmen, Hindus and Muhammadans alike, make offerings for safe passage up or down.

Near these sculptures on an upright rock are faint traces of carved panels but they are much worn.

The adjacent Temple of Mahadeo known as Budha Nath which with other remains I propose to number as 124 Bengal list is enveloped in the roots of an old Bar (Vata) tree; the temple is an old one of the premuhammadan period, its sanctum is 11 feet across each way, but only the west wall for a portion of its height is intact, the North and South walls are partly standing only, and have been repaired with rude boulders set in mud; there are numbers of sculptures collected in the cell, which originally inshrined an emblem of Mahadeo of which the top alone is now visible; among the sculptures are numerous fragments of the Gupta period, carved into the conventional rock cut caves; there is also a fragment of a small model of a Temple, shewing the moulding of the cornice over the straight part of the walls, and the shape of the pyramidal roof which covered it; the pyramid being a low flat one: The Temple was built of bricks set in mud and their surfaces carefully smoothed, the bricks measure $9\frac{1}{2}'' \times 6'' \times 2''$: each face of the cella interior, appears to have possessed 3 inches roofed over by flat lancet shaped arches, 3 feet 8 niches across with $7\frac{1}{2}$ inch pillars between, the arches being formed by corbelling out the layers of bricks and cutting them to shape; as the walls have fallen mostly, it is not possible to ascertain the size of the entrance doorway.

On the rocks at the rivers edge are sculptured (Object No. 15 Bengal list) Varaha, Surya, Vajra Varahi or some similar goddess. Ganeça, Mayadevi, and Hara Gauri; I infer consequently that the sculptures date to the early Gupta period; higher up is a figure of Buddha, known as Bhairon; it is a seated figure in the style of the Buddha Gaya ones, seated cross legged, while one hand hanging down points to the earth, as witness to his good deeds; it is called "Bhairon": among the fragments in the Temple, is a 4 faced Mahadeo with a tall peaked Jata; there is also a piece of sculpture representing a model temple adjacent; on the front vertical panel (below the conventional pyramidal stepped roof) is a figure of a woman holding a lotus and a jar and a sculptured

tree or lotus stalk rising up from the base to the crown of the model; but as the top is broken off it is not possible to say whether it is meant for the stalk of a shady or sacred tree or of a lotus.

There are numerous small caves, some natural and some partly helped by art, in the side of the hill.

The principal objects of worship now, are however inshrined in 2 temples, built in the 19th century, and consist of figures of Parvati and Siva, no doubt more or less ancient; but though the temples are modern, the original throne or Sinhasan is ancient, as are also the bases of some large votive Stupas (in stone, sculptured) and several figures broken or partially broken. A very fine but unfortunately broken figure of the sun, outside, is also ancient; the 7 horses are well sculptured, and the figure itself deserves preservation and record by photography, for the excellence of the execution of the sculpture; it was inscribed in characters of the 9th century but only a few of the letters now remain, "Deva Sri * * * Pra Kirtti ta * * * tu devasva." The objects here might be numbered 125 in the Bengal list.

On the hill now stands a Bungalow, but no doubt once stood a temple; and on another part of the hill, are to be seen traces of the platform of a Masjid; but this Masjid and its platform are built of bricks differing from, and the Masjid is differently aligned and eccentrically placed in reference to another, and obviously older platform, which it overlies; so that there is clear evidence here, of the existence of at least one temple converted into a Masjid: it is said that a former owner Mr Macdonald, in cutting a roadway from Patharghat (the ghat below) to his house above (on the peak of the hill) came upon a buried copper vessel full of copper coin, which he sent to the Asiatic Society's Museum.

I do not particularly describe the caves of Patharghatta as Bishop Heber and others have already done that for me (they might be included in the Bengal list as No. 126), but I must not leave the subject without some passing notice of the very fine sculptures on the vertical face at the North-East side of the hill near its summit; one series consists of the Das Avatar of Vishnu, and another series consists of scenes from the lives of the various Avatars; these sculptures resemble very remarkably the sculptures of the earlier Guptas, in Besnagar and Udigiri, and I have no hesitation in ascribing them to the 3rd century A. D. Tradition says, that the Raja who caused these to be sculptured, lived East of Patharghat hill, and the site, of his fort, is pointed out on a piece of high ground, covered with

fragments of brick and debris; he had a daughter who was an ascetic, and for her he built a Temple and residence on the little mound to the North-West of Patharghat, with a covered passage to the Ganges: remains of brick debris still exist to attest the existence of buildings of some kind on the hill and down the slope: close to it is the present Madhorampur factory, and to the South of the factory are tanks, two of which have each a small square island in the centre of the tank; all these are ascribed to the same Raja, the sites all need careful examination but without trial trenches any further examination by merely looking at the remains, will be useless: as the sculptures on the hill are undoubtedly early Gupta, I think the ruins well worthy of further examination by trial trenches, I would number these sculptures and the two mounds of ruins as Nos. 127, 128, 129 in a future issue of the Bengal list.

For further particulars of Kahalgaon and Patharghat. I refer to Bishop Heber, to Hunter and to Cunningham Vol. XV.

Between Kahalgaon and Patharghat, is a hill known as Gangaldei Hill, it is close to the ruins just described, and has a tree on the top, to which pilgrimages are made; I identify it with Taverniers Pel Gangel, which he notices below Bhagalpur. Near it is Kasdi hill crowned by a targe tree, a Hindu Temple and Mahadeo; these two objects I would add to the Bengal list as Nos. 130, 131.

Objects Nos. 16 and 17 are noticed by Bishop Heber, there are two Masjids and a Dargah; one of the Masjids has recently been repaired by some public spirited Muhammadans, the other one is decaying, and as there is nothing remarkable about, it, or about the Dargah, this slight notice of them is sufficient.

A small cave on the river face of Pir Painti, in the hard conglomerate, appears to have escaped the notice of all the travellers. There is also, on the highest point of an adjacent knoll, an old tomb of some European, which a couple of rupees would help in preserving.

ARCHÆOLOGICAL SURVEY

OF

BENGAL

REPORT

1887.

BY

JOSEPH DAVIDITCH MELIK-BEGLAROFF,

ARCHÆOLOGICAL SURVEYOR, BENGAL.

PART II.

ARCHITECTURE AND ART.

REPORT

OF THE

ARCHÆOLOGICAL SURVEYOR OF BENGAL,

FOR 1886-87.

PART II.

The village of Umga whare the Temple the subject of this report is situated is a small village about 2 miles to the south of the police outpost of Madanpur in the district of Gaya on the Grand Trunk Road, and about 5 miles from Deo the seat of the present Maharaja of Deo. It has been selected as the subject of this second part of the report for the reason that it was the building of which the drawings were fully ready, as it is obvious that withont completed drawings the writing of the Architecural report is not possible.

The Temple at Umga is aligned with its entrance facing the East; through inadvertence, the exact angle at which the longitudinal axis of the temple is set out in regard to the meridian, was not observed, but roughly it appears to have been aligned fairly correctly.

As there are no surrounding buildings, nor any more ancient remains at the site of the Temple to have had any possible influence on the orientation, this omission becomes a matter of small consequence, as whatever the error, this error is purely one of setting out, and can explain no anomaly in the orientation, nor throw any light on any matter connected with the temple, except the degree of knowledge of the architect and the accuracy with which he did his work: for this last other data are available.

The material of which the temple is built, is a coarse-grained granite, obtained, so far as can be judged, from the hill itself on which the temple stands: the architect had evidently studied the subject of supply of material carefully, as most of his stone, appear from remains of marks of the quarrymens operations yet existing, to have been quarried, higher up the spur of the hill, on which the temple stands, thus facilating carriage of the material from the higher quarrying ground to

the works; a few stones appear to have been quarried lower down however, but the quarries down below are not extensive. Although the ruins of several other temples stand on the hill higher up, of which two are undoubtedly more ancient, they were either standing in good order, at the time this one was built, or the architect or his employer, had conscientious scruples against utilising the material of the older Temples (if they were ruinous at the time) in erecting a new one.

The orthodox recognised procedure, of setting up a solitary pillar in front of the temple, as an earnest of the builders pious intention to build the Temple, was here followed; and the solitary stambha still stands in front of the entrance, on the rock, a few feet higher up. I suppose that a figure once occupied the summit of the solitary pillar; (as is the case elsewhere) the figure however has long ago gone, and as none exist in or near the temple; I suspect the Muhammadans threw it down and broke it.

Naturally with such a difficult material as a coarse-grained granite, delicacy of execution or minute elaboration in design or execution was not to be expected, and the architect wisely, and unavoidably confined himself to bold, if somewhat coarse, ornamental features; the mellowing hand of time, and of the whitey-grey lichen, which continues to fasten itself on granite, has softened the surfaces, and added a beauty, which assuredly the architect had not contemplated.

But although the execution is, and so far as can be judged now, was designedly coarse in the exterior; the interior was more carefully, though still somewhat coarsely finished; the surfaces are more even, but nevertheless sufficiently coarse to lead to the inference, even if yet adhering fragments did not attest the fact beyond the possibility of denial, that a fine coat of lime-smoothing covered the coarseness, and corrected the slight errors of execution in the forms, surfaces, and edges, of the mouldings and ornaments.

That a similar coat, perhaps a trifle thicker, of fine lime smoothing was employed in the exterior, I do not doubt, the numerous errors and irregularities, too great to have been permissible by any careful architect, yet sufficiently minute to be readily capable of correction by a fine coat of lime smoothing, compel me to suppose, that as in other temples in India so far as I have seen, so here, the architect relied on the perfectly well known, legitimate, and recognised custom, of a thin, covering coat of lime-smoothing, to remove the small defects unavoidable with such a material as granite, worked by ordinary Indian workmen.

A prejudice exists I believe in the minds of European architects, against covering surfaces of cut stone with a coating of lime smoothing. I remember a time when it would have been a serious architectural or artistic heresy to have insinuated, that the Greek sculptures, over which connoisseurs went into extacies were ever colored; and yet I believe it is now established beyond the possibility of dispute, that the marble surface of Greek sculpture was colored, and colored rather gaudily; and it does not appear, that Indian Architects Hindu or Muhammadan ever entertained that (and as it appears to me, accustomed to Indian modes of thought, unreasonable) prejudice against the use of lime-smoothing and color interiorly, and of lime-smoothing, with or without color exteriorly, which many modern European Architects entertain: with the single exception of buildings of the Asoka period, (and a very few isolated examples of similar buildings of a very early age) whose religious edifices, as well as caves and edict pillars, had their surfaces not only cut and finely smoothed, but actually polished, I have reason to believe, so far as my experience in North India goes, that every other building and its sculpture, was covered with a very fine coat of colored lime smoothing, or other coloring material or of gilding: from the all but actually polished sculpture of the Grecobactrian age in the Panjab (as shewn in the Yusufzai sculptures) to the polished surface of the stone work in the Adina Masjid of Muhammadan Kings, there have been, in almost all buildings and sculpture, indisputable actually existing traces, and in all, the strongest presumptive evidence, of the use of gilding, or of color or of both. To understand Indian Art, it is necessary to divest ones self of western prejudices, and enter into the spirit of an art, which, employed by a different people, under radically different climatic conditions, and with widely different æsthetic ideas, could not, in the very nature of things, avoid differing in the coloring, as they did in the forms and arrangement of their surfaces, and even in their constructive expedients, from the practice in western countries.

This very radical difference, is perhaps best shewn in the fact, that the courses of stone, composing the temple, are laid on each other dry, without any cementing or other binding material of any kind whatever; the stones are, in the lower courses, bound together with iron cramps, but this is omitted at least so far as one may judge from external appearance only, somewhat higher up, where the stones are simply laid on each other, and rest there without any other resistance to a pushing force than the friction due to weight alone, between the cut surfaces. In the lower courses the heights of the courses in the interior and in the exterior surface being different, the pushing

out of the courses could not take place without first turning over the stones of the course whose upper surfaces overlap as it were the lower surfaces of the course in process of being pushed out, but even this resistance to displacement does not exist at the small height from the ground where the surfaces of the courses, outer and inner, are on the same level.

With such a constructive disposition of material, it must be evident, that for stability, the courses should be subjected to only directly vertical forces; no lateral thrusts, or at most but a very small amount of lateral thrust, was alone admissible, and this appears to have been accomplished by the arrangement of the parts.

It will be seen from the section (Pl. I) that the interior arrangement of chambers under the tower, is, first a room 12 x 10 (in round numbers) and 13 feet high, roofed by beams and slabs, resting on corbels and architraves; over this lower chamber, is another similar chamber 12 x 10 about 14 feet high; roofed by the method of intersecting squares; that is, one set of slabs is placed diagonally on the bearing walls, so as to leave open a square space, diagonally placed in regard to the original opening, and of exactly half its area; this area is similarly dealt with by the next tier of slabs till at last the opening is sufficiently reduced to be slabbed across.

It is evident that if the chambers end here, there is absolutely no thrust whatever on the side walls of the tower, and the only question is, as regards the thickness and consequent strength of the stone slabbing, to bear the enormous weight of half the height of the tower: whatever the conjectural thickness of the uppermost slabbing, it is self evident that the 2 lower tiers of diagonal slabbing of the 2nd Chamber 14 inches thick each, are quite incompetent to support the tremendous weight, supposing the rest of the tower solid; a third Chamber similar to the lower two must consequently exist above the second one; and its entrance (now permanently closed) will I conjecture be found at the great lotus boss which forms such a prominent feature in the facade (see plate I) at a height of 45 feet from the ground; and in all probability; a 4th Chamber, marked by the projecting lion in the facade. (See plates).

With these 4 great chambers occupying the main body of the tower, it is clear that the uppermost chamber may be roofed easily by stone beams of the necessary depth, breath and strength to bear the comparatively small weight of the pinnacle, especially if, as I conjecture, the pinnacle itself he hollow; I am of opinion that the uppermost chamber is roofed not by intersecting squares but by a system of corbelling which in-

volves the consideration of forces differently distributed though still pressing really vertically without *appreciable* thrust; but where correct, or even approximate dimensions, are from the nature of the case, unobtainable, further discussion of the distribution of forces in the tower is useless.

In regard to the Mandapa, the Mahamandapa, the 3 Arddha Mandapa's, (the two side ones closed and formed into chambers below and windows above) and the Antarala, it is obvious that all the forces in operation are vertical, and the only questions are (1) the proportion of bearing surface to the weight, (2) the strength of the beams supporting the roof.

Omitting the tower, and the small portion of the weight of the flat roof of the Antarala borne by it; the total bearing area at the plinth, of the rest of the building, amounts in round numbers approximately to 720 square feet, and the total weight on it to 21,400 cubic feet of stone; assuming the weight of a cubic foot of this granite at 160 lbs. per cubic feet, the average weight per square foot borne by the courses at the plinth is found to be 42½ tons or only 32½ lbs. per square inch; while at the foundations, the pressure is rather less, owing to the greater bearing surface as compared with the increased weight.

The maximum intensity of pressure, will be at the foot of the shafts of the pillars; and of these, at the foot of the 2 front pillars of the Mahamandapa. Each of these, bear the weight of a square of roofing, besides their own weight, and that of the architraves, amounting in the aggregate approximately to 600 cubic feet of stone and of terrace roofing; assuming the average weight of the mass to be 150 lbs. per cubic feet, the bearing surface of the pillars at their base being 1,050 square inches, the pressure is seen to be only 86 lbs. per square inch nearly, a proportion, which, even for the weakest sorts of granite, is an intensity only one-seventieth of the limiting or crushing pressure which it can bear, and which, for the material actually used, probably only one-hundredth of what the material can ultimately bear.

Of course, the walls of the sanctum carrying the tower, are bearing a greater pressure, but even if solid, the pressure would not be greater than one-twentyfifth of what the material would easily bear.

The total bearing surface, or area of points of support, in the Temple is approximately 1,220 superficial feet, while the total area covered is 2,400 superficial feet, giving an approximate proportion of half the total area covered, as devoted to the surface of support, but this proportion is less in the Temple, exclusive of the tower, whose support monopolises no less than five-

twelfths of the total area of support, while the surface covered is but three-and-a-half-twelfths of the total area covered: excluding the tower proper, the surface of support bears to the area covered, the approximate proportion of one to two-and-a-half, that is to say, of the total area covered 40 per cent. is devoted to the points of support.

The most massive buildings in Europe do not approach this proportion in massiveness, yet so cleverly has the design been made, that though undoubtedly massive, one fails to realise that it is really four times as massive as the most massive buildings in Europe, and the general impression left by the temple as a whole, is rather that of an elegant though somewhat heavy grace, than of the intolerable massiveness which the figures disclose on calculation.

It is evident, that so far as the internal forces of the building are concerned, it is perfectly safe and might last for an indefinitely long period; there are however external forces; of these the only ones which appear likely to be injurious are the growth of vegetation, and wanton or wilful destruction by human agency.

Both these forces have been at work on the Temple; some stone blocks near the base of the Temple are displaced, and were, I am told, so displaced, by some villagers many years ago, for the sake of extracting the iron cramps; and as the iron cramps have been wrenched and cut out, the story of this wanton vandalism appears well founded; at present, however, and for many years the Rajas of Deo have taken an interest in the Temple, and the process of wanton destruction is not likely to be repeated.

Vegetation has at some remote period been active in disrupting the stones in several parts, notably in the front facade near the top, while almost the whole of the upper line of the double cornice over the Mandapas, has also at some time fallen down, in all probably forced out by trees growing on the terraced roof, which composed, as it is, of partially burnt brick and lime, would afford a secure and ample nourishment to any plants, that could once succeed in forcing their roots into it. At present and for some time past the Rajas of Deo have kept the Temple free from vegetation.

The only places where a mortar composed of partly burnt broken brick and lime has been used, are, in the terrace roofing of the Mandapas, the upper surface of the shoulder of the Temple from where the neck of the pinnacle springs, and the upper surface of the great corrugated wheel on the top; each of these terracings as they now exist is the result of subsequent

repair, and I believe that the original old surface which must have become partially broken up by vegetation, was simply overlaid by a fresh layer of the concrete mortar now visible. The roof surface, as it exists now, slopes down from the centre, where it, along with the bearing slabs, forms a mass of the enormous thickness of 4 feet 4 inches to a thickness of only 2 feet 8 inches at the edges over the cornice; the fall being no less than one foot 8 inches. It appears to me impossible that the original design could have contemplated loading the bearing slabs and architraves with such an enormous thickness of material, and my impression is, that the original surface was fully 2 feet lower, this would bring the surface at the centre of the roof to a point a little higher than the top of the lower one of the double cornice marked C, (Vide plates) and with a gentle slope, would bring the edge, to a level a little below the upper surface, and a little above the lower surface, of the stone block, which has been cut to form the mouldings of the cornice; I am led to infer this from the spouts, of which two are now lying about, which are formed of stone blocks of just the thickness of the cornice blocks, with a channel formed by cutting through about half the thickness: these spouts would, in the original building, have projected at the level of the lower cornice, beyond the face of the cornice, and cleared the edge of the eaves; a position which spouts in other similar buildings, generally occupy; and the upper cornice would then form a sort of low parapet round the roof.

That the repairers, whoever they were, laid on a coat two feet thick during one repair, appears, however, exceedingly improbable. As the Muhammadans had certainly appropriated the temple at one period, as shewn by the Arabic inscriptions and the Kalimeh sculptured on the architraves and elsewhere in the interior, I infer that they repaired it once; there may or may not have been a second repair between the first repair and the recent (I mean within the memory of comparatively young living men) repair by the Deo Maharaja, but I think it certain that the Temple underwent certainly two, possibly three repairs.

The lime employed has been the ordinary kankar lime, obtained by burning the common nodular deposit of impure carbonate, found in the vicinity, with little trouble and cost. The proportions used in the composition of the original terracing are of course unobtainable, that of the last, appears to be rather more than one of lime to two of surkhi with a hard coat of pure lime smoothed over the surface.

The masonry work appears to have been fairly well executed, the stones are cut correctly to shape, and fit each other fairly

well, in the face work outside; and most of the joints in the interior appear to fit accurately; but the joints are not always correctly squared, and a good deal of the fitting must have been done by actually chiselling the surfaces to fit each other on the spot; the horizontal lines of joints in the interior are not straight or even; the lines of joints do not run through or round, but are irregular; this is rather an advantage constructively, as wholesale sliding of the stones at the joints, is thereby rendered impossible, but with the surface unplastered, it does not produce an agreeable effect: exteriorly there is very much greater regularity in the joints, though even here occasional stray irregular joints obtrude themselves.

But though the blocks forming the exterior and interior vertical surface are on the whole fairly well fitted, this is not so in regard to the fitting together of the stones of the floor, which is executed in a very slovenly manner; as the foundation is solid rock none of the very disagreeably prominent unevennesses and irregularities of level can he ascribed to unequal sinkage, but must be ascribed to careless and slovenly work: nor are the joints of the roof slabs fine or even; possibly the floor had a layer of terracing on it which originally covered it and hid the irregularities; but if so this has long ago disappeared. The drainage too of the interior is very defective, indeed the side chambers below the two windows are without any outlets for water, and any that finds its way in by leekage between the joints of the stone floor of the window projections, must soak into the ground. The Mahamandapa too has its floor lower than that of either the sanctum or of the entrance, and any water which found its way there, must have soaked in or at best remained till it evaporated.

Exteriorly, being built on the ridge, the drainage is perfect.

The mouldings that adorn the Temple occur mainly in the tower, the rest of the Temple being exteriorly devoid of mouldings, except just at the plinth, just below the window, and the crowning double cornice. There are, however, at the doorways and at the windows, where pillars and pilasters occur, further mouldings, which properly pertain to the pillar, its base, capital, corbels, architraves, and eaves. The interior is also devoid of mouldings, except some lines round the doorways, on the throne, at the doorstep, and in and belonging to the pillars.

Of the mouldings on the tower, the diminution from the plinth to the superstructure, at the line A. B. (see plates) is effected by a moulding, which does not occur in classical architecture and but very rarely in gothic; its dimensions, and form, which is a sort of the inverted quarter round of classical architecture, is given in the drawings; (see plates) above this, a series of bold mouldings, carries the building gracefully up to the com-

mencement of what may for the present be called the Sikhra proper. This space amounts to 252 inches, and is divided and sub-divided into smaller portions, by three for a divisor; thus the lowest vertical surface with its surmounting inverted "Cymarecta," is just one-ninth or 28 inches; of which the Cymarecta or curve is again just about one-ninth or three inches; the next moulding, consists of a broad flat surface, set back from the surface of the lower member by $\frac{1}{7}$th of of its height, and chiselled on top into the inverted quarter round (with a radius of 6 inches, or $\frac{2}{3}$ths of its aggregate height,) and a low recessed band or groove; this member also aggregates 28 inches or $\frac{1}{9}$th of the total height; above this come a torus, and a band, surmounted by an inverted cavetto, separated from each other, and from the lower member, by deeply recessed groovings or bands; these two mouldings jointly aggregate also $\frac{1}{9}$th of the total height, or 28 inches.

Each successive main projection or facet of the facade, being reduced on each side, as well as set back, in passing up from the lowest ninth to the second ninth division of the aggregate height, leave naturally 4 gaps marked G, (see plates), and by a happy inspiration, these very gaps, which would become a serious embarrassment elsewhere, are taken advantage of, and by deeply, indeed very deeply sinking inwards this surface, and carrying it up right to the very summit of the tower proper through every moulding, conforming in its surface to each successive moulding, but in each case having its profile deeply set back from the adjacent surfaces of the projecting facets, it is converted from a source of embarrassment, into what must be regarded as the most distinctive, and indeed characteristic feature of Indian Temple Architecture.

I invite the special attention of architects to this, which is perhaps the one subordinate feature, on which, more than on any other *single* feature, the peculiarity of Indian Temple Architecture depends.

These three divisions of $\frac{1}{9}$th each, carry the lower mouldings up to the base of the pilaster like member (see plate) to which the facets are now reduced by a setting back of its surface *all round* about 9 inches, or $\frac{1}{27}$th of the aggregate, and $\frac{1}{3}$rd of the height of each of the three lower divisions; the height of these pilasters is about 84 inches or just $\frac{3}{8}$th or $\frac{1}{3}$rd of the total height of 252 inches: the pilasters are crowned, by what must be taken to occupy the place of the capital and the surcapital usual in Indian pillars; the capital or lowest member, of the features which surmount the pilaster is a plain block with a deep groove running horizontally across its middle; it is nearly 28 inches in height, or $\frac{1}{3}$rd of the total aggregate height of the upper members, which is 84 inches, or just $\frac{1}{3}$th of the

total height; this is surmounted by a projecting band or vertical surface, with an inverted cymarecta, about 9 inches or $\frac{1}{9}$th of the aggregate height of the upper members, or $\frac{1}{27}$th of the total height; this with an intervening deep horizontal groove, is again surmounted by an exactly similar and equal moulding; these two mouldings run right round the building including the Mandapas; these are again surmounted by a torus, and with an intervening horizontal groove, by a projecting band and inverted cymarecta, and finally a cymarecta carries the mouldings up to the bottom of the Sikhra proper; these aggregate $\frac{5}{9}$th of the aggregate height of the upper members, making the aggregate of all the upper mouldings, one-third of the total height of the facade, from the plinth to the bottom of the Sikhra.

The law then, summarising the results arrived at, appears to be, to divide the height from the plinth to the bottom of the tower proper or Sikhra into there parts, of which one (subdivided again into 3 divisions) goes to the mouldings of the base; one to the shaft of what I have called and is virtually a pilaster; and one consitutes the capital, subdivided again into $\frac{1}{3}$rd for the lower member of the capital, and $\frac{2}{3}$rd for the mouldings which together constitute the sur-capital, and which project from the pilaster to the same extent as the base mouldings, or just $\frac{1}{27}$th of the total height.

The most projecting facet of the tower basement, does not however go up beyond the pair of cornices which go right round the building; it apparently served the purpose of providing a suitably prominent place for the inshrining of a statue; but as the temple was at some period appropriated by the Muhammadans, no statue now exists in any of the niches.

But the influence of a definite regular law is not confined to the tower; the dwarf pillars of the windows, are just 84 inches high or $\frac{1}{3}$rd of the total height from the plinth to the bottom of the Sikhra, while the diameter of their shafts and upper square member (forming an integral part of the shaft) being 14 inches very nearly, is $\frac{1}{6}$th of its height and also $\frac{1}{18}$th of the total height.

The height of the tall plain square pilasters in front, from the base to the corbels above, which once no doubt supported the eave, is 14 feet 8 inches or 176 inches which is exactly half the total height of the lower square portion of the tower 252 inches.

The thickness of the corbel 14 inches is exactly $\frac{1}{18}$th of the total height.

But we have not done with the definite and simple proportions which regulate the parts of the temple exteriorly.

Taking 12·25 inches as a modulus, the breadth of the projecting facets of the tower are, at the plinth, 6 modules for the

centre one, and 1 module, $3\frac{1}{2}$ modules, $4\frac{1}{2}$ modules respectively, working towards the corners from the centre; while the projections of each part beyond its adjacent one, is exactly one module.

But the central facet, serves only as a sort of a pedestal for a niche and stops short at a height of 21 feet 8 inches from the zero of my measurements, *viz.*, the lowest floor level inside; the real facet which runs through to the top of the tower, is therefore this central sub-facet, together with its two adjacent small facets that is $6+1+1$ modules or 8 modules in width; which is exactly $\frac{1}{3}$rd of the total width of the side of the tower, and equal to the sum of the remaining two subordinate facets, *viz.*, the corner one and the intermediate one on each side.

The height of the square portion of the tower from zero of measurements is 24 feet 5 inches or just 24 modules, which is exactly equal to the total breadth of the tower at plinth.

The total height of the entire temple to the top of the pinnacle, is 74 feet, or 72 modules, or exactly 3 times the breadth of the tower at plinth, and also 3 times the height of the lower square portion of the tower, from zero of measurement to the bottom of the Sikhra as just shewn.

The height from zero to the base of the neck of the pinnacle is 62 feet 8 inches which is very nearly 3 times the 252 inches alluded to above.

The height from zero to the top of the curve of the tower (exclusive of the coping) is 61 feet 4 inches, or 60 modules, or $\frac{5}{6}$th of the total height, which is 72 modules.

The height of the curved part of the tower alone, is exactly 37 feet, or 36 modules, which again is exactly half the total height of the temple to its pinnacle, and one and a half times the breadth 24 modules, of the square part of the tower.

These are the obvious proportions, but there are others.

The diminution of the tower at the top is just exactly half, that is the tower is only 12 modules wide at the coping of the shoulder while it is 24 modules wide at the plinth, but the diminution is not uniform, for, as the central facet diminishes at the top till it is only about 16 inches wide or $1\frac{1}{3}$ modules, the side ones must necessarily diminish less than half, the rule is very elegant and simple. The total width of the tower is divided into 3 parts, of which one goes to the central facet, and the other two, one on each side, represent the sum of the corner and intermediate facets; these are in width at top $\frac{2}{3}$rd of the width at the bottom; calling the total width of tower base b, the formula is, top width $= \frac{1}{2}b = \frac{2}{3}$ of $\frac{1}{3}b + \frac{2}{3}$ of $\frac{1}{3}b + \frac{1}{18}b = \frac{2}{9}b + \frac{1}{18}b + \frac{2}{9}b$: where the width of the central facet at top is $\frac{1}{18}$th its width at

plinth, and the corner and intermediate facets are $\frac{2}{3}$rd of the width of what they are at plinth.

It must be understood, that, to avoid complication, I have taken the facets as intact; actually the facets are separated by the deep narrow grooving G mentioned before, and the widths of facets and of grooving, all diminish regularly to $\frac{2}{3}$rd.

The exterior curve of the corner facets of the tower, is obtained by describing an arc, with radius equal to total height of temple, from a centre, at a height of $\frac{1}{2}$ the height of the tower (measured from zero of measurement to the neck of pinnacle) (*i.e.*) in this case, the centre falls in the horizontal line at the top of the 2nd corner Amalaka at 31 feet 6 inches above zero and the radius is 74 feet 0 inches. But there is a particular reason why the curve should begin at this height which is 28 feet 2 inches above the plinth, for it will be seen, that including the facets, the extreme width across, from the outmost facet North or East to the outmost facet South or West above the cut off of the niche facet, (which does not go up all the way) is just exactly 28 feet 2 inches. So that by beginning the curve at this line, there is left a cubical block below, as a support to it; an arrangement which is satisfactory to the eye; for as is well known the eye finds satisfaction in combinations however varied, of regular figures.

It will be found that the perpendicular distance of the curve at the shoulder, from a vertical tangent drawn from its starting point (*i.e.* at 31 feet 6 inches) is as nearly as possible one-fourth the total breadth of the base, or $\frac{1}{19}$th h. where h the total height = 3 b. b being the width of tower at plinth.

The space therefore, between the two opposite curves, drawn with the above radius, and corresponding centres will be $b - \frac{2}{12}h = \frac{1}{3}h - \frac{1}{6}h = \frac{1}{6}h = \frac{1}{2}b$.

That this is the correct line of the centre of the curve is shewn by a very close agreement of the curve so drawn, with the curve of the facet as carefully noted down by the method of ordinates from the actual building; and the architect has himself marked it, by placing a figure of Ganeça, in the front facade of the tower. The Ganeça it will be seen, is seated on a pedestal, of which the upper surface is exactly 31 feet 6 inches above zero.

It is now necessary to draw a curve, which, retaining the same curvature, will at the shoulder, leave a space which will measure horizontally $\frac{2}{3}$rd of the width of the corner facet.

The radius must obviously be the same, to retain the same curvature, but the centre will need to be shifted, both upward

and sideways. It will be found, that such a curve, will need its centre to be 36 feet 10 inches above zero of measurement, and of course to be shifted sideways the width of the facet; similarly it will be found that the curve, which will leave between the curve just described, and itself, a horizontal space equal to $\frac{2}{3}$rd of the width of the intermediate or next facet, will have to be struck from a centre 40 feet 0 inches above zero.

It will be seen that the heights of the 3 centres (and the corresponding three opposite centres) are at the heights 31 feet 6 inches, 36 feet 10 inches and 40 feet 0 inches above zero; that is at $\frac{8}{16}$th, $\frac{9}{16}$th, and $\frac{10}{16}$th, of the height of the tower, (exclusive of pinnacle) that is of the 63 feet from zero of measurement. What a simple and beautiful Law!

But I will not be content with merely shewing the agreement of the curve on paper, which from its small scale and possible errors is liable to objection; the heights are capable of strict methematical calculation and demonstration.

Drawing a curve with radius=h, the ordinate of the point, of which the abscissa is $\frac{11}{12}$h, the first or outermost reduction will be, $\sqrt{h^2-(\frac{11}{12}h)^2}=\sqrt{\frac{23}{144}h^2}=\cdot 4h=29$ feet 8 inches nearly, where h=74 feet as in this case: that is to say the end of the curve which will give the needful reduction will be 61 feet 2 inches above zero, as the curve starts from 31 feet 6 inches above 0 and the ordinate is 29 feet 8 inches. The *actual* height of the end of the curve of the tower which is the bottom of the coping at the shoulder is 61 feet 4 inches.

The 2nd reduction or the reduction which the 2nd curve must effect is $4\frac{1}{3}$ feet (*i.e.*) $\frac{1}{4}b+\frac{2}{3}\times\frac{3}{16}b-\frac{3}{16}b=\frac{3}{16}b$ or $\frac{1}{16}h$ very nearly, and the ordinate which will give this abscissa with the radius h, will be $\sqrt{h^2-(\frac{5}{16}h)^2}=\sqrt{\frac{31}{256}h^2}=3\cdot 4h=25$ feet 2 inches where h is 74.

But the 25 feet 2 inches has to be measured downwards from the coping, as the height of the coping, fixed by the requirements of the first curve, is not alterable now.

Consequently the centre of this curve will be 25 feet 2 inches below the coping or 36 feet 2 inches above zero of measurement.

The *actual* point marked by the architect is the shoulder of the miniature temple on the front facade, corresponding to the top of the 3rd Amalaka, at a height of 36 feet 10 inches above zero.

The third reduction will be $\frac{1}{4}b+\frac{2}{9}b-\frac{1}{3}b=\frac{5}{36}b=\frac{5}{108}h$. and the ordinate corresponding to this abscissa will be $\sqrt{h^2-(\frac{103}{108}h)^2}=\cdot 3h=22\cdot 2$ feet.

This ordinate must, for the same reason as the last, be measured downwards from the coping; which gives the height of the centre of the 3rd curve at 39 feet 2 inches above zero of measurement; the *actual* centre is at 40 feet and is marked by the Lions' head on the front facade.

It is now seen that the theoretically exact centres differ but little from the actual ones as marked by the architect, and the reason for this difference is not far to seek: the theoretical mumbers are arrived at by an elaborate calculation, while the actual points marked, are, at the simply proportioned heights above zero of $\frac{8}{16}$, $\frac{9}{16}$ and $\frac{10}{16}$ of the height of tower.

Remembering that the radius is 74 feet, the displacement of the centre by 10 inches, the maximum variation between theory and practice, will alter the positions of the points on the curve by scarcely an inch, within the limits, within which alone, the curve is actually used.

Is it possible, in face of this beautiful simplification, for practical application, of a complicated calculation, to say that Hindu Architects built by rule of thumb?

I have however not done with the proportions of the exterior of the temple yet. The diameter of the neck of the pinnacle is 8 modules (*i.e.*) $\frac{1}{3}$ the breadth and $\frac{1}{9}$h: while that of the great corrugated wheel above is 12 modules$=\frac{1}{2}$b$=\frac{1}{6}$h.

The extreme length of the Temple from the line of pilasters in front, to the primary corners of the Temple tower, is just 64 modules or $\frac{8}{9}$th of the height, and the width across, from the North wall of the North window, to the South wall of the South window, exteriorly, is 52 modules or $\frac{3}{4}$h nearly the width of the projecting portion of the Mandapa on the East, is 33 modules or $\frac{11}{24}$h; and its projection in front nearly $14\frac{1}{2}$ modules$=\frac{1}{5}$h. The projection of the two windows North and South is each 9 modules nearly or $\frac{1}{8}$h: and the length East and West of the projecting windows is each $14\frac{1}{2}$ modules or $\frac{1}{5}$h.

There must be other simple porportions in the composition of the exterior of the temple. One of these is the law which rules the apparently capricious variation of the heights of the corner Amalakas, but I have been unable as yet to reduce them to one series, and though they are reducible to three series, the result does not commend itself to me, and I prefer to think I have not hit on the law which regulates their distribution.

Interiorly the parts are also arranged in definite simple proportion, the sanctum is curiously enough, not quite square here but measures 12 modules E. W. $\times$ $10\frac{1}{2}$m N. and S., the length is just half the outer dimension of the tower, the proportions

reduced to terms of the breadth of the tower b being $\frac{8}{16}b \times \frac{7}{16}b$ while the passage leading to it, is 6 modules × 6 modules very nearly.

The width of the Antarala, that is the narrow space between the square of the Mahamandapa and the doorway of the sanctum is 5m wide.

The Mahamandapa also is not square, being 27 modules E. W. × 24 modules N. S. or $\frac{3}{8}h \times \frac{3}{9}h$.

The width of the passage from the Arddhamandapa or portico to the Mahamandapa is 6 modules $= \frac{1}{4}b = \frac{1}{12}h$.

The height of the sanctum is equal to its length very nearly; the height of the Mahamandapa is $\frac{3}{4}$th of the width.

The 4 central pillars are, including their bases and capitals, as in the dwarf pillars of the window, but excluding the corbelled sur-capital, 6 diameters high, which is the proportion in the dwarf pillars; but the more slender *dentated* pillars, are, including their capitals and bases, but excluding the corbelled sur-capital, $10\frac{1}{2}$ diameters high; while their shafts alone, are 7 diameters high.

I have assumed $12\frac{1}{4}$ inches as a modulus, because every important feature of the temple is a multiple of it; I am quite aware that so far as we know now, the cubit is the unit of measurement in India, and as most of the main measurements are multiples also of the cubit, of $1\frac{1}{2}$ modules or $18\frac{3}{8}$ inches, it may be that was the unit of measure employed. For instance, expressed in these cubits, the principal measurements would be—

Interior	Mahamandapa	length	...	18 cub.
		breadth	...	16 „
		height	...	12 „
	Sanctum	length	...	8 „
		breadth	...	7 „
		height	...	8 „
	Passage	length	...	4 „
		height	...	7 „
	Dentated pillars width (very nearly)		...	1 „
Exterior	Width of tower		...	16 „
	„ central facet		...	8 „
	„ corner facets		...	3 „
	Width of great wheel		...	8 „
	Height of temple		...	48 „
	„ to top of curve of tower		...	40 „
	„ of square part of tower		...	16 „
	„ curved part alone		...	24 „
	„ of Mandapa		...	14 „

But a great many minor measurements, and some few larger ones, are not exact multiples of the cubit; so it has been considered better to retain for use 12¼ inches as a modulus.

It is needless to detail the forms of the pillars, their capitals, their bases, and their corbelled capitals, and architraves, as the drawings give the details with sufficient accuracy and minuteness; nor to give any further details of mouldings, outside or inside, all which are already better given in the drawings: of the eaves, the only specimen existing, has a projection beyond the face of the building equal to $\frac{1}{24}$th of the height at which it is placed; but whether the projection of the eave, is proportioned to its height relating to the ground line, or plinth line, or to the pillar over which the only example occurs, it is difficult to judge from a single example: in the latter case the projection beyond the corbel is $\frac{1}{12}$th of the height it is placed at, relatively to the bottom of the pillar, and $\frac{1}{8}$th of the height very nearly beyond the face of the pillar itself. In other examples elsewhere I have found it to be $\frac{1}{5}$th also, relatively sometimes to the pillar, and sometimes to the total height of its position above the plinth.

The only Amalaka proper is the great corrugated wheel on top, which has 26 corrugations, but I have here called the various divisions into which the 4 corner facets are broken up by mouldings Amalakas also, because these divisions, which are here plain plane-surfaced-square blocks, are, in examples elsewhere, and that frequently, rounded and corrugated. It is difficult to know what name to give to the various parts of an architecture, which has found no proper exponent yet in the English language, while its native name has been long lost: my native masons however during the repair of the Temple at Buddha gaya called them Charkhi—Charkhi would therefore seem to be the proper word for it, notwithstanding that its literal meaning is simply wheel.

The sculpture which must once have adorned the temple, was certainly broken up and destroyed by the Mussulman occupants, when they appropriated the temple; but some have since been brought, probably from elsewhere; it is needless therefore to say anything regarding them.

The only sculptures not broken up, and yet in Situ, are the lotus, the projecting Lion the sculptured Lions head, and the Ganeça on the facade, besides 2 subordinate sculptures and a fine figure of Ganeça high up with the lotus for his pedestal as it were, not yet noticed; except this last, every one of them are rudely executed, and the great projecting lion, has more the appearance of a mangy dog than of a lion. Evidently the Sculptors were very inferior workmen, while the refractory nature of the material must have greatly increased their difficulties.

It now remains to trace if possible the basis of composition of the design.

It will be seen on reference to fig I (pl. 4) that in plan, the design is covered by half a circle (or square) for the Portico, a circle (or square) for each of the two windows, a circle (or square) for the Antarala or vestibule to the sanctum, a circle (or square) for the sanctum, half a circle (or square) for each of the three outer faces of the tower, and four circles for the 4 corners of the Mahamandapa; all of the same size; and one circle of 4 times the size, or twice the diameter, for the Mahamandapa.

The side elevation (see fig 2 pl. 4) consists of two equal circles, (or squares) and a cube surmounted by a half Sistrum, or Vesica-pisces; and the front (or back elevation) of two circles, differently arranged, with a cube between, surmounded by the half Sistrum see (plate 4) fig 3.

These arrangements, of regular grouping, of regular figures, cannot fail to produce an impression of symmetry and regularity which by a law of our very nature, satisfies the eye, producing a feeling of pleasure and an impression of beauty.

But there is a further basis; it will be seen, (see fig 1 pl. 4) that in plan the temple is fairly inclosed in the mystical Sistrum, (a figure well known to Western Architects and frequently used by them, as the Vesica-pisces) described from centres, which are at the centres of the outer sides of the two windows; one apex of the Sistrum marking the outer limit of the back of the sanctum. In elevation, too it will be seen, that the Vesica-pisces described with radius equal to the height of the tower, from a centre on the line of the commencement of the curve of the tower, fairly represents the basis of design of the tower; the apex of the Sistrum marking the pinnacle, and its centre appropriately marked by the lower figure of Ganeça.

But there is a deeper basis than this obvious one.

If a Sistrum be described on the plan, (see fig. 1 plate 4) with the centres of the opposite curves on the central line of the Mahamandapa and a radius equal to 6 times the distance between the centres of the Mahamandapa and of the Grihagarbha, it will be found, that the centre of the sanctum, is at the point, which marks one-third of the Sistrum, while the forward apex, falls about the position of the votive pillar in front, and the backward apex falls near a rock sculptured saivic emblem behind the Temple. The full length of the Sistrum being also 6 times the length of the distance of the centre of the sanctum from the centre of the Sistrum or equal to the radius, which is in theory, the perfect *yantra*.

In short the emblem of the divinity, would in this case occupy in the centre of the Grihagarbha just the symbolically correct positon, in this profoundly mystical Sistrum, the *yoni yantra* of the tantric symbology, which it ought to occupy.

Now referring to fig 2, with the same radius, and the centre line on the line where the Sikhra proper begins, describe an *exactly* similar Sistrum, and the very remarkable fact will become evident, that the centre of the floor of the sanctum occupies the same symbolically correct position, on this Sistrum, which the centre of the sanctum in the plan occupies in its corresponding yantra; that is, dividing the whole length of the vertical yantra into 3 parts, the centre of the floor of the Grihagarbha marks one of the points of division, while the upper figure of Ganeça for the location of which, on the facade, at the spot it occupies, there is no obvious reason, is seen to mark the other division of the perfect yoni yantra.

As the distance of the centre of the Mahamandapa is 31 feet very nearly from the centre of the sanctum, and as the floor of the sanctum is 6 inches above zero, the point at which the curve of the tower begins which is actually 31 feet 6 inches above zero is exactly 31 feet above the floor of the sanctum, and is not only equal to the distance between the centres of the Girhagarbha and the Mahamandapa, but further represents $\frac{1}{6}$th of the radius, with which the curves of the yantra have been described.

I refrain here from enlarging on the deep symbolism which underlies the arrangement and combination, the symbolic and secret basis which underlies the design; partly because grossness of the ideas which it symbolises in a material, carnal point of view, needs no exposition; but mainly because, my knowledge of the more profound tantric Symbolism, is not sufficiently extensive to enable me at this stage, to launch into a disquisition on a subject which needs careful and delicate handling.

This being the first time in which Indian Archictural Archœology has had applied to it, research of the kind followed in the preceding pages, comparison with other buildings on these lines is impossible; until more buildings have been subjected to examination, with a special view to the evolution of the laws of construction proportion and composition, to compare or creticise would be folly. This report therefore refrains from comparing with each other, or criticising the works of Architects, who worked on bases, and with laws, which for the first time to my knowledge, it has been attempted in this report, to reach, and then only as regards the individual temple dealt with herein; but which, have previously, not been even looked for, in any single instance, in any work yet published.

It will possibly be objected by some cautions thinkers, nurtured in a contempt of the Architects of India (because those alone whom *they* see, are unworthy), that what I have called laws and principles of construction and of proportion, and the esoteric basis of the composition of the temple, are merely coincidences. I would point out to them, that if Indian Architects deserving of any treatment, except a benevolent contempt, have ceased to exist, it is because their services are not in demand; the ancient ruling families are every where declining or declined into poverty; brahmans versed in esoteric tantric doctrines, are looked upon with feelings more approaching horror than respect, by the new generation, trained in schools of western materialism, and enthralled in a longing admiration for the practical material sciences, which have they see, transferred power and wealth, from their country, and themselves, to a foreign nation; and it is no wonder, that under such discouragement, knowledge of the arts subserving a decaying cult, should die out. Temples are still built it is true, but mostly by rich money lenders or successful traders, (universally disliked by the learned and the high born) who know little, and care less, for any esoteric or exoteric doctrines except the doctrines of plutolatry.

But it is not yet known that they do not exist, possibly they do, only they shun us as the embodiment of the system, which has destroyed their livelihood and influence.

Whether however architects who understand the esoteric principles of Indian Architecture, exist or not, the coincidences shewn are too numerous, to be the result of accident. Every feature is seen to be dependent on the main ones of breadth, or length, or height of the Temple; and even such minor and apparently trivial matters, as the location of sculptures at points, which, so far as can be seen on the face of it, appear to bear no special relation to any feature, are seen to have been so placed not at random, but in obedience to well known esoteric principles: such an overwhelming array of coincidences, all satisfactorily accountable by simple laws, cannot possibly be the result of accidental combination.